

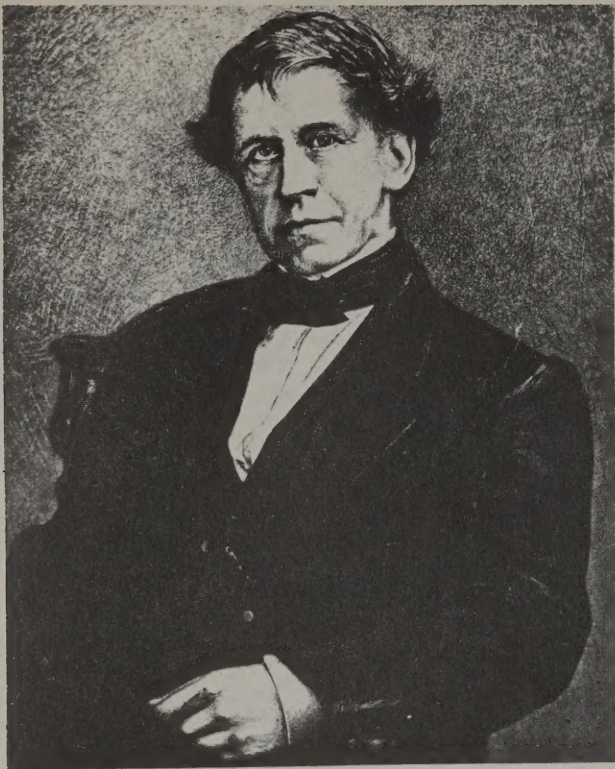
THE POLAR TIMES



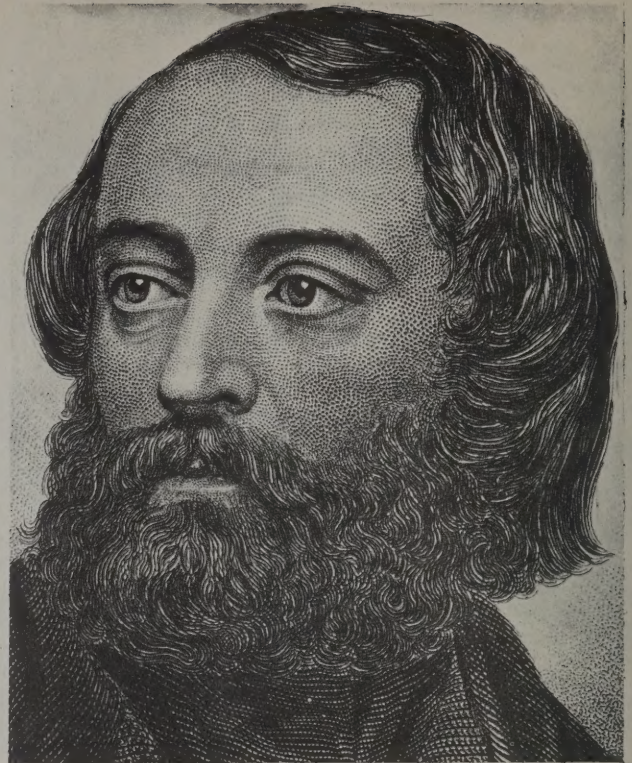
Courtesy Captain L. H. Roddis (M.C.), U. S. Navy

ONE OF DE HAVEN'S VESSELS IN THE FIRST GRINNELL EXPEDITION

This was the first American arctic expedition, and its leader was an officer of the Navy.



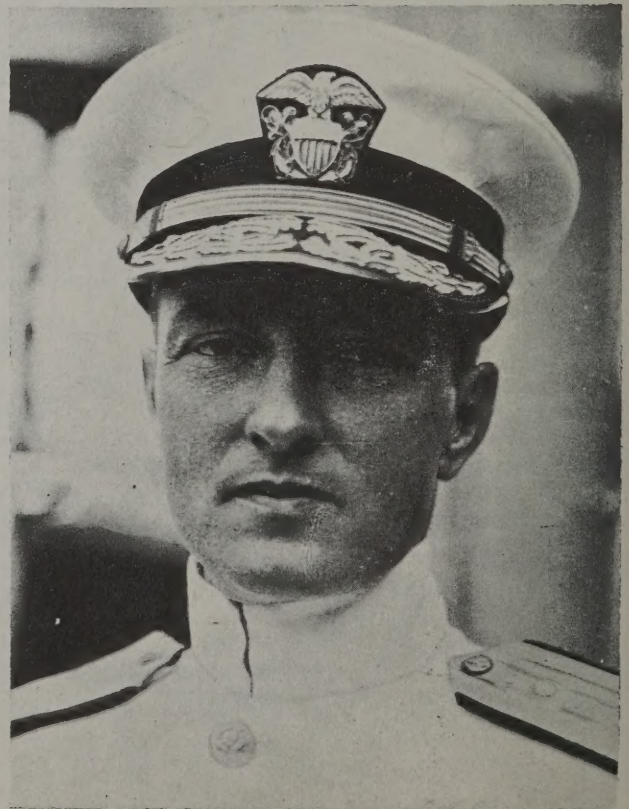
REAR ADMIRAL CHARLES WILKES, U. S. NAVY
Leader of the famous exploring expedition in the Southern Pacific.



ELISHA KENT KANE, PASSED ASSISTANT SURGEON, U. S. NAVY
Leader of the Second Grinnell Expedition.



REAR ADMIRAL ROBERT E. PEARY, CIVIL ENGINEER CORPS, U. S. NAVY,
REACHED THE NORTH POLE, APRIL 6, 1909



REAR ADMIRAL RICHARD E. BYRD, U. S. NAVY (RETIRED)
The first to fly over both the North and South Poles.

The Polar Times

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THE UNITED STATES NAVY AND POLAR EXPLORATION

By CAPTAIN LOUIS H. RODDIS (M.C.), U. S. Navy

THE subject of exploration in the arctic and antarctic regions either by official expeditions of our Navy, or by officers and men of the Navy as leaders or members of private expeditions is one that has been to a large degree neglected by the naval historian. Yet, from the standpoint of the extent and importance of geographic and scientific discovery, it constitutes one of the most prominent chapters in the history of the exploration of the globe. Among the principal achievements in the field of polar exploration in which officers and men of the Navy have participated may be included the virtual discovery of the Antarctic Continent; the discovery of the North Pole; and air flights over both the North and South Pole. Many important additions to the maps of the world have been made, and scientific knowledge of vast importance has been accumulated by the enterprise of the United States Navy in this field. All of this work has been done within a little more than the span of a century, for prior to 1836, the Navy had not taken any part in polar exploration.

The first and one of the most important of all exploring expeditions was that made under the leadership of Lieutenant Charles Wilkes, U. S. Navy, which resulted in the determination of the existence of a land mass in the region of the South Pole of possibly continental proportions. This expedition was not primarily for the purpose of polar exploration but rather for a geographic study and survey of an extensive area of the Pacific Ocean and its shores. Its official title was "The Pacific Exploring Expedition." It was a strictly governmental project, authorized by a special act of Congress on May 18, 1836, and was one of the few voyages of polar exploration carried out by a purely naval squadron. It was not until over two years after the passage of the Congressional Act that the expedition was able to set out. This delay was in great measure due to the intrigues and disputes in regard to the organization of the expedition and the selection of the one who was to lead it. Jealousy among the officers being considered and other difficulties finally led to the selection of a fairly junior officer,

Lieutenant Charles Wilkes, U. S. Navy, and he was accordingly placed in command. The expedition is more commonly referred to as the "Wilkes Expedition" than by its long official title.

The selection of Wilkes was not entirely a happy choice. He was junior in rank for so important a command and had the reputation of being a martinet. It is certain that he maintained an iron discipline and was feared and hated by many of his subordinates who considered him as a perfect "sundowner." On his return, he was tried by general court-martial on charges made by several officers who served under him but was acquitted of these charges. It must also be said that he showed throughout the period of his command great resolution and tenacity of purpose, and the expedition in point of accomplishment is one of the most important in the whole history of geographic exploration.

The squadron assembled under Wilkes consisted of the *Vincennes* (flagship, of 780 tons); the *Peacock*, 560 tons; *Porpoise*, 230 tons; and the *Relief*, a store ship. Two New York pilot boats, the *Seagull*, 110 tons, and the *Flying Fish*, 96 tons, accompanied the expedition also as tenders. The officers and men came from the Navy, but there were in addition a number of civilians on the scientific staff, including three naturalists, a philologist, two botanists, two draftsmen, and a taxidermist. The expedition sailed on August 18, 1838, from Hampton Roads and it anchored at New York on its return on June 10, 1842, so that it was gone nearly four years. During this time it covered an immense area and made a most extensive survey of the Pacific in which 280 islands were examined and chartered. The narrative and the scientific reports appeared in 19 large volumes and a number of atlases. Besides this there were five volumes of papers which were not published.

The exploration of the Wilkes Expedition in the South Polar regions was made in two parts. The first amounted to a reconnaissance of the Antarctic, starting from Orange Harbor on the southern shore of Tierra del Fuego. Wilkes left the flagship at Orange Harbor and with the *Porpoise* and the tenders sailed southward on

February 25, 1839. On this voyage they sighted part of the South Shetland Islands, and an area sighted some years before by an American whaler, Captain Palmer, and now known as Palmer's Land. Bad weather and icebergs compelled them to turn back and Wilkes reached Orange Harbor again on March 30. On this expedition a latitude of 70° S. was reached and the ice barrier was seen. It must be remembered that the seasons are reversed in the southern hemispheres and, therefore, Wilkes made this attempt at the beginning of winter. The second voyage to the Antarctic he made from Sydney, Australia; then known as Port Jackson. He made an earlier start this time and on January 16, 1840, he sighted land upon the barrier reef of ice. He followed the barrier to the westward sighting land from time to time. On January 28, he approached within a half mile of land and as the weather was clear, though a gale was blowing, he was able to make out land far to the east and west as well as to the southward. Wilkes now believed that he was dealing with a land mass of large size, which led to his designation of the discovery as that of an Antarctic Continent. On February 21, 1840, after having reached the latitude of 61°-30' S., the expedition turned back to Sydney. Cold, storms, and sickness among the crew led almost to a state of mutiny, but in spite of this Wilkes continued the voyage until he was convinced of the extensive character of the land mass he had discovered.

It was this latter fact which gives particular significance to the Wilkes Expedition in the field of polar exploration, for one of its achievements which may properly be credited to the United States Navy is the discovery of the Antarctic Continent. It is true that Palmer, Ross, and others had sighted land in the Antarctic before, but Wilkes, more than any other, showed that it was of continental proportions.

Another expedition in the Pacific of almost as great importance as the Wilkes Expedition, though far less known, was that of the "North Pacific Exploring Expedition" which was sent out to complete the work of Wilkes and to do for the North Pacific what that officer had accomplished

in the South Pacific. In 1855 Commander John Rodgers on Wilkes' old flagship, the U.S.S. *Vincennes*, entered the Arctic Ocean from Bering Strait, and visited Herald Island which had previously been discovered by Kellett. Rodgers reached latitude 72°-37' N., at that time the highest latitude attained by a sailing ship in the Arctic Ocean north of Bering Strait. Rodgers, though close to Wrangel Island, did not see it on account of the fog. He made important hydrographical surveys and soundings in Bering Strait together with astronomical and ethnological observations. One of his officers, Lieutenant Brook, spent some time on the Asiatic shore of Glasscap Island in 65° N. latitude 172°-35' W. longitude.

The next polar experiences of our Navy resulted from the search for the lost expedition of Sir John Franklin. Franklin left England on May 26, 1845, in two ships, the *Erebus* and the *Terror*, which had been used by Sir James Ross in his explorations in the Arctic. Among the 129 souls in the crews of the two ships were many other officers besides Franklin with arctic experience. This expedition was sent out by the Royal Geographical Society and under the auspices of the British Government for the purpose of seeking the Northwest Passage. After two years in the arctic the ships had to be abandoned and the entire party perished in an attempt to reach civilization by an overland journey. When Franklin failed to return and no news could be obtained from him, numerous attempts were made to make contact with the expedition or to discover its fate. As year after year went by, the search became international in character, although it was many years before the mystery was completely solved and the fate of Franklin and his officers and men was fully explained. Records left in cache, the accounts of Eskimos, and various relics of the expedition discovered by different searchers finally solved the puzzle. The whole story of the Franklin expedition is probably the most famous in the annals of the Arctic. The fame of its leader; the mystery which long surrounded its fate; the persistence in the encouragement of the search for Franklin by his young and beautiful wife; all conspired to make it the best-known perhaps of all polar voyages.

In 1851 the U. S. Navy was represented in the search for Franklin in what is known in the history of arctic exploration as the First Grinnell Expedition. This was largely financed by a New York merchant, Henry Grinnell, who purchased for the purpose two ships, the *Advance* and the *Rescue*. The officer in command, however, Lieutenant E. J. DeHaven, came from the Navy as did most of the other officers and

men. The *Rescue* was commanded by Mr. S. P. Griffin. With DeHaven was Passed Assistant Surgeon Elisha Kent Kane of the Navy, who was to later serve as leader of the second Grinnell Expedition in 1853 and to win fame as one of the most celebrated polar explorers of the nineteenth century. DeHaven's ships were caught in the ice pack in the middle of Wellington Channel, drifted as far north as 75°-25' N., and landed and discovered Murdaugh Island and what is now called Grinnell Land. For 8 months they were frozen in the ice, drifting 1,050 miles through Wellington Channel and Lancaster Sound. The drift was first north, then south and east. The darkness of the arctic winter, the privation, isolation, and danger made it a terrible journey. There was constant apprehension that the ships might be crushed by the ice and sunk, in which case the crews would have been left on the drifting ice floe. They had no control of the movements of the ships and were compelled to drift with the floe to wherever it might take them. Fortunately, in July the vessels succeeded in escaping from the melting ice but they were so damaged that DeHaven decided to abandon the search and return to the United States. Lieutenant DeHaven may properly be considered as the first American explorer in the North Polar region, so that the American pioneers in both the Antarctic and Arctic were officers of our Navy.

The second Grinnell Expedition was commanded by Dr. Elisha Kent Kane, DeHaven's medical officer on the first expedition, and the *Advance*, which had been refitted in 1853 by Henry Grinnell and George Peabody, was again used. Kane examined the north part of Smith Sound and he found a channel leading into what is now known as Kane Sea. Here he wintered in Rensselaer Harbor, 78°-37' N., 71° W. His assistant, Dr. Isaac I. Hayes, crossed the frozen Kane Sea with one man and a dog sled and was the first white man to reach Grinnell Land which he charted as far north as 79°-43'. After two years in the Arctic, Kane was compelled to abandon his ship and after a desperate land and boat journey succeeded in reaching Upernavik, Greenland. Kane's farthest north was 80°-35', at that time the highest recorded latitude reached by civilized man in the Western Hemisphere. The most outstanding result of his expedition, however, was the fact that it opened up a waterway towards the North Pole, which became known as the "American Route." This has been followed by more polar expeditions than any other, and it might be said with greater success, for it was the route of Peary in the discovery of the North Pole in 1909. Discovery of the Kane

Sea and the charting of Grinnell Land, as well as the making of valuable observations relating to the flora and fauna and the collection of a great amount of meteorological and magnetic data, were among the fruits of this expedition. Kane was one of the first to make important observations regarding the physics of the ice and glaciers in the Arctic. He is noted, too, as the first American to attain international fame as a polar explorer.

One of the most interesting of all American arctic explorers was Charles Francis Hall who was a notable figure in arctic exploration in the decade after the Civil War. Few explorers have accomplished more with less in the way of money and equipment. He was one of the few successful arctic travelers whose work was "done on a shoestring." His account of his preparations for one of his earlier expeditions sounds more like a Boy Scout getting ready for a hike than a serious explorer planning to enter the Arctic. He was so successful, however, that in 1870 he received governmental aid, and \$50,000 was appropriated by Congress and a vessel provided by the Navy for his use. This was an old naval tug called the *Periwinkle* of about 400 tons. She was strengthened and renamed the *Polaris* and sailed July 3, 1871, on instructions from the Secretary of the Navy to discover the North Pole, for one part of the Secretary's instructions to Hall, who commanded the expedition, was as follows:

Having been provisioned and equipped for two and a-half years, you will pursue your explorations for that period; but should the object of the expedition require it, you will continue your explorations for such a further length of time as your supplies may be safely extended. Should, however, the main object of the expedition, viz., attaining the position of the North Pole, be accomplished at an earlier period, you will return to the United States with all convenient dispatch.

Hall did not reach the Pole and died near "Thank God Harbor," an anchorage formed by an indentation in a huge iceberg in latitude 81°-37' N. Although the remainder of the expedition carried on the work, the *Polaris* was wrecked. Some survivors remained on the ship and were rescued by a Scotch whaler near Cape York. Others after a 1,300-mile drift in the ice were picked up off Labrador by the U.S.S. *Tigress*. It is of interest that none of these were lost and in fact their number was increased by one, for an Eskimo woman, Hannah, gave birth to a baby girl who was also a survivor of this journey.

The anxiety in regard to the *Polaris* led to the dispatch of the U.S.S. *Juniata* under the command of Commander Daniel L. Braine, U. S. Navy, in search of her. The *Juniata* sailed from New York, June 24, 1873. After a voyage as far north as Labra-

dor, her steam launch which had been specially fitted to work through the loose pack ice was sent farther on to continue the search. The launch was called the *Little Juniata* and was commanded by a man who was to later lead one of the most famous and tragic arctic expeditions. This was Lieutenant George W. DeLong, afterwards commander of the ill-fated *Jeannette*. With him was a Lieutenant Charles W. Chipp, U. S. Navy, also with DeLong on the *Jeannette*. It was their first arctic duty. They returned safely from this voyage with the *Little Juniata*, and having ascertained that the *Polaris* survivors had been rescued, the expedition returned to the United States.

The U.S.S. *Tigress* which rescued the ice drift party of the *Polaris*, the party having with it the Eskimo woman, Hannah, and her baby daughter, had been sent out also by the Navy Department to search for the *Polaris*. The *Tigress* on this journey was commanded by Commander James A. Greer, U. S. Navy.

It was fourteen years after the close of the Civil War before the Navy again took part in arctic exploration and then it was connected with one of the most celebrated of arctic voyages. The area north of Bering Strait, Alaska, and eastern Siberia was marked "unknown" on the maps of the time. There was much speculation among geographers as to what might be found there and many believed that Wrangell Island, which was then known as Wrangell Land, was a land mass of continental proportions, a true Arctic Continent. Others believed that this area was an open Arctic Sea. In 1879, Commander George W. DeLong, U. S. Navy, led an expedition to study the possibilities of a Northeast Passage from an approach to it from the North Pacific, and to examine the supposed Arctic Continent. The sponsor of this expedition was Mr. James Gordon Bennett, the celebrated and eccentric publisher of the New York *Herald*, who previously had sent Stanley to Africa in search of Livingstone and who was greatly interested in geographic discovery. Four other officers of the regular Navy accompanied DeLong, Lieutenants Charles W. Chipp and J. W. Danenhower, Chief Engineer G. W. Melville, and Passed Assistant Surgeon J. M. Ambler.

DeLong's vessel, the *Jeannette*, was caught in the ice and drifted north of the so-called Wrangell Land which was thus proved to be only a small island. For two years the ship remained locked in the ice pack and there was constant danger of its being crushed. A new island in 76°-47' N., 159° E. was discovered on June 3, 1881, and named the *Jeannette*. The Chief Engineer, George W. Melville, landed on

it, and Henrietta Island in 77°-08' N., 158° E. was also located and charted a short time later. On June 12, 1881, the *Jeannette* was crushed in the ice in latitude 77°-15' N. and 155° E., and her crew abandoned the ship. With five boats and nine sledges they fought their way through the ice floes to one of the new Siberian islands (Bennett Island) about 150 miles away. In attempting to reach the Lena Delta, the boat under Lieutenant Chipp foundered and he and his crew of eight were lost. This occurred in a storm on September 12. In the same storm the remaining boats under DeLong and Chief Engineer Melville became separated. DeLong with Dr. Ambler and 12 men landed on the Siberian coast on September 17 in latitude 73°-25' N. and 126°-30' E. Here they abandoned their boat and carrying only their arms, records, and some food they followed the shores of the Lena River southward. Delayed by the sick and helpless in the group, DeLong sent two seamen, the youngest and strongest of his party, ahead for help, while he and Dr. Ambler remained behind. The two seamen reached the Siberian town of Bulun after many hardships on October 29. In the meantime, Melville with nine men on September 26 had reached the village of Geomovialocke, on the Lena. Nothing was heard of DeLong and Ambler. Melville made every effort to reach them but the severe Siberian winter made effective search impossible. In the early spring of 1882, however, the bodies of DeLong, Ambler, and the remainder of the party were found frozen in a camp on the northern shores of Siberia. The tragic end of this expedition and the heroism displayed by its members have given it an unusual interest and made it the subject of considerable literature. Aside from this, the scientific results were important as DeLong was the earliest to show that the area north of Bering Strait was probably an open sea dotted with islands rather than a continental land mass.

Two names besides DeLong's are particularly noteworthy in connection with the story of the *Jeannette*. One of these was Chief Engineer Melville. It was Melville's skill and initiative which saved the ship on one occasion, and both in the boat journey and in the subsequent search for DeLong's party he showed courage and ability of the highest order. Melville later published one of the best books on the whole *Jeannette* expedition entitled, *In the Lena Delta*. He served in 1884 as "Inspector of Coal" at New York, a now forgotten assignment in navies, and ended his career as a rear admiral and Chief of the Bureau of Steam Engineering. The other notable name was that of Dr. James M.

Ambler whose professional skill, noble character, and leadership made him an outstanding figure with DeLong's party. It was he who kept the journal in which were recorded the last days of this party, their sufferings, and their unflinching courage and devotion to duty to the very end.

Attempts to obtain information regarding the fate of the *Jeannette* and the survivors from that ship resulted in two more arctic expeditions under the auspices of the Navy. One was under Lieutenant Robert M. Berry, U. S. Navy, who with the U.S.S. *Rodgers* was sent into the Bering Sea with the idea of following somewhat the route of the *Jeannette*. They visited Wrangell and Herald Islands and the expedition was terminated when the *Rodgers* burned at St. Lawrence Bay, November, 1881. At the same time that the *Rodgers* was sent into Bering Sea to examine the area north of Eastern Siberia, the steam-sloop *Alliance* under Commander George H. Wadleigh, U. S. Navy, was sent across the North Atlantic and into the Arctic, north of Norway to Spitsbergen. Neither of these expeditions obtained any real information regarding the *Jeannette*. Wadleigh, however, reached latitude 80° N. The Navy Department also sent out Lieutenant G. B. Harber, U. S. Navy, and Master William D. Schuetze, U. S. Navy, overland through Russia and Siberia. They accompanied Melville in the spring of 1882 to the Lena Delta and participated in the finding of DeLong's camp and returned with the eleven bodies which had been recovered. Schuetze, who became a lieutenant in 1885, also later held the truly nautical post of "Superintendent of Compasses."

The next work of the U. S. Navy in the Arctic was in connection with the rescue of the Greely Expedition in 1884 by the relief ships *Thetis* and *Bear* under the command of W. S. Schley, afterwards famous for his part in the Battle of Santiago. Commander W. S. Emory was second in command. A chartered whaler commanded by Ensign W. I. Chambers, U. S. Navy, accompanied them as a collier. The Greely Expedition was the result of the suggestion of Lieutenant Charles Weyprecht of the Austrian Navy, who in 1875 recommended that both geographical and other scientific information regarding the north polar region be collected through the establishment by various governments of observation stations about the polar region.

This resulted in the establishment of the so-called "international circum-polar stations." Fifteen expeditions were sent out by the United States, Denmark, Germany, Austria-Hungary, Russia, Finland, France, Great Britain, Holland, Norway, and

Sweden. The main United States station was under the command of Lieutenant A. W. Greely of the United States Army, and consisted of four officers and nineteen men of the Army who were taken to Discovery Harbor in August, 1881. The next three years were spent in the Arctic, during which extensive exploration was made in the Grinnell Land area and important scientific data gathered. The failure of supply ships to reach the expedition as planned reduced them to a state of starvation. When the relief ships, *Thetis* and *Bear*, reached the Greely party at Bedford Pin Island, on June 22, 1884, they had for some time been living on seaweed, lichens, and seal-skin thongs, and only seven officers and men survived. Melville accompanied Schley to assist with his experience with arctic conditions and his advice proved most valuable. The rescue was accomplished in extremely bad weather, and good seamanship, judgment, and courage were all exhibited in the saving of the remnants of Greely's party. The Greely and the DeLong expeditions were the most disastrous in the history of American arctic exploration.

Perhaps the outstanding contribution to polar exploration by an officer of the United States Navy was the discovery of the North Pole. This was accomplished by Robert E. Peary of the Civil Engineer Corps of the Navy, who on April 6, 1909, reached latitude 90° N. This achievement was the culmination of almost a lifetime devoted to arctic exploration. Peary's first arctic journey had been in 1886. This was in Greenland and was an investigation of the inland ice of that great arctic island which is almost large enough to be considered as an eighth continent. Nearly all of Peary's seven important arctic journeys were made either in Greenland or using Northern Greenland as a base. In 1894 he discovered the famous collection of meteorites near Cape York, Greenland, and in 1896 and 1897 he succeeded in bringing the largest of these, weighing nearly a hundred tons, back to the United States. This was the great "Ahnichtigo" or "Tent" meteorite of the Cape York group. He had previously brought back two smaller meteorites known as the "Woman," weighing 5,500 pounds, and the "Dog" of 1,000 pounds. These were, and still are, the largest meteorites in any museum.

Peary was one of the first to draw attention to the importance of meteorological observations in Greenland as a basis for weather prediction, both in Europe and North America, and he was one of the discoverers of the "wind system of the Greenland ice cap," the knowledge of which has exercised a great influence upon weather prediction in the Northern Hemisphere.

In 1905, Peary on his seventh trip to the Arctic in a specially constructed polar ship, the *Roosevelt*, established a land base in northern Greenland and by sledge made 87°-6' N., at that time the farthest northern latitude reached by man. In 1909 with an advance base at Cape Columbia and a secondary base at 87°-47' N., he completed the dash via dog sled to the North Pole. The American and other flags were hoisted at the Pole and a diagonal strip from his silken flag with a document recording the fact of reaching the Pole was placed in a snow cairn raised on a hummock. This document is so interesting that it is quoted herewith in its entirety. Of particular interest, of course, is the heading "90 N. Lat., North Pole, April 6, 1909."

90 N. Lat., North Pole,
April 6, 1909

Arrived here to-day, 27 marches from C. Columbia.

I have with me 5 men, Matthew Henson, colored, Ootha, Egingwah, Seegloo, and Ookeah, Eskimos; 5 sledges and 38 dogs. My ship, the S.S. *Roosevelt*, is in winter quarters at C. Sheridan, 90 miles east of Columbia.

The expedition under my command which has succeeded in reaching the Pole is under the auspices of the Peary Arctic Club of New York City, and has been fitted out and sent north by the members and friends of the club for the purpose of securing this geographical prize, if possible, for the honor and prestige of the United States of America.

The officers of the club are Thomas H. Hubbard, of New York, President; Zenas Crane, of Mass., Vice-president; Herbert L. Bridgman, of New York, Secretary and Treasurer.

I start back for Cape Columbia to-morrow.

ROBERT E. PEARY,
United States Navy

Almost as celebrated as the discovery of the Pole was the controversy which followed it due to the claims of priority of Dr. Frederick H. Cook, an explorer who had returned from the arctic shortly before, had announced and been recognized by many as the discoverer, and who was being lauded for that achievement when Peary returned. After years of bitter controversy, Cook's claims were largely discredited and Peary's discovery has been generally accepted. Still it is only fair to say that many explorers were champions of Cook, the press was favorable to him, and even today a few Cook adherents and Peary critics are to be found.

Peary is remembered mainly for his attainment of the North Pole. What is not so well known about him is the leading part he played in his later years in the encouragement of aviation in the United States and particularly his expressions of belief in the future of the airplane in war. His almost prophetic utterances on this latter subject entitle him to be considered one of the apostles of military aviation.

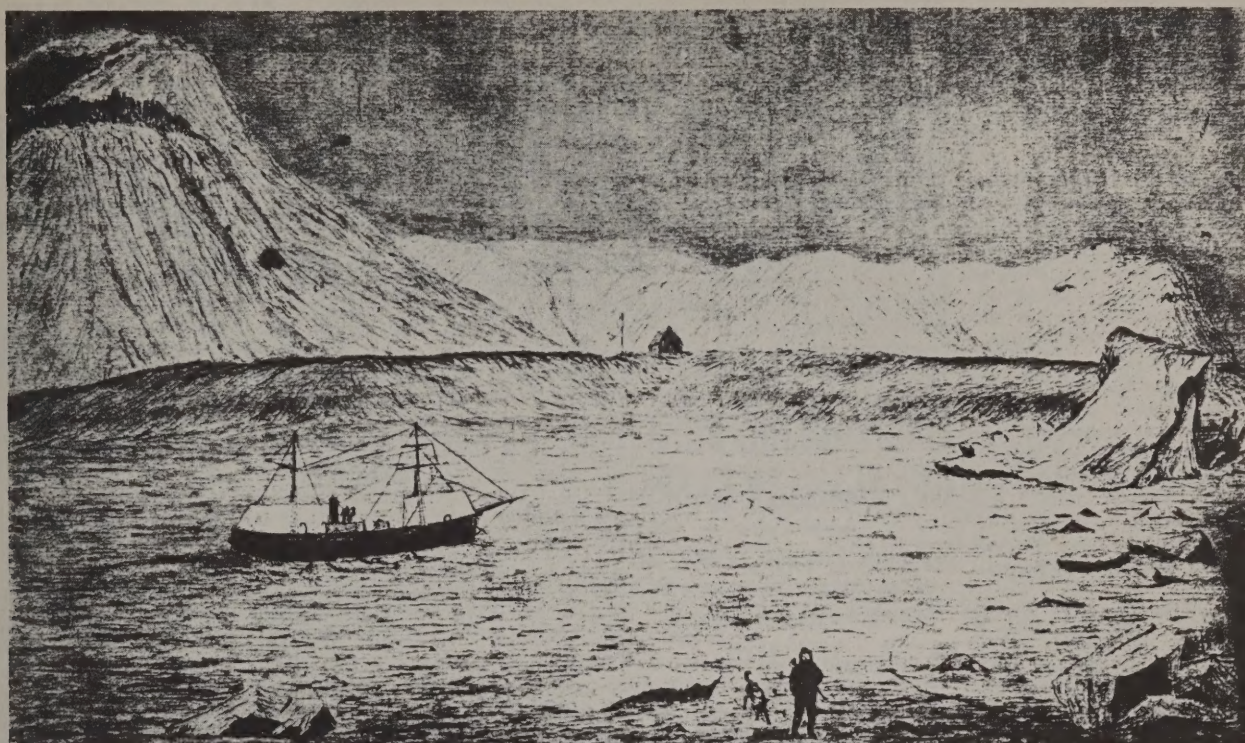
As an officer of our Navy, Peary was the first in what has been called the "in-

fantry assault on the North Pole." It was another officer of the United States Navy who led in the aerial attack on it. This was Rear Admiral Richard E. Byrd, U. S. Navy (Retired). He is a graduate of the Naval Academy in the class of 1912, but had been retired for injuries received in athletics. When the United States entered the World War in 1917 he was returned to active duty and realized an ambition to become an aviator. Some time after the World War, he was returned to the retired list. From boyhood he had been interested in polar expeditions and the polar regions; and in 1925 he accompanied the MacMillan Polar Expedition as commander of the aviation unit. The Navy Department furnished planes and other personnel and this experience in arctic flying led Byrd to plan another expedition, this time with the ambitious project of making a flight to the North Pole. With him was Floyd Bennett, loaned by the Navy as a pilot mechanic who had been with Byrd on the MacMillan expedition. From a base in northern Spitsbergen (Kings Bay) about 700 miles from the Pole, Byrd and Bennett took off and flew a 3-motor monoplane over the Pole which they reached at 9:02 P.M., May 9, 1926, Greenwich time. They circled several times over the area at altitudes of 1,000 to 2,000 feet. They returned safely to Kings Bay with a total flying distance of 1,360 miles in 15½ hours. Byrd submitted his charts and records to the Navy Department and to the National Geographic Society for authentication and record. A short time after the Byrd-Bennett flights, the Norwegian explorer, Amundsen, and the Italian aviator, Nobile, flew over the North Pole by dirigible. Amundsen who was the first to reach the South Pole was then the only man who had seen both the northern and southern poles of the earth.

In 1928 Byrd headed an antarctic expedition and took with it two planes. In 1929 he made a successful flight over the South Pole and returned to his base in Little America, Antarctica. As both Amundsen and Bennett are dead, Byrd has the unique distinction of being the only living man who has looked down upon the snowy wastes of both the North and South Poles.

Byrd led a second antarctic expedition in 1933 and a third in 1940 in which extensive geographical explorations were carried on, as well as scientific study in the fields of geology, meteorology, botany, zoology, glaciology, terrestrial magnetism, and oceanography.

Although few of Byrd's expeditions were directly under the Navy Department, he was an officer of the Navy and in every instance, planes, ships, equipment or personnel had been loaned, at least in part, by the Navy Department. Indeed, the



Courtesy Captain L. H. Roddis (M.C.), U. S. Navy

THE POLARIS IN "THANK GOD HARBOR," A FLOATING ICE HARBOR FORMED BY AN INDENTATION IN AN EXTENSIVE ICE FLOE

last expedition was almost entirely a governmental affair and was designated as the Government Polar Expedition, although in the earlier ones, Admiral Byrd had raised the funds by his own efforts, his lectures, books, and through the assistance of scientific societies or individuals interested in arctic exploration. In general, however, Byrd's arctic and antarctic discoveries and expeditions may be classed as a part of the Navy's contribution to the subject of polar expeditions, and Byrd himself was made a rear admiral by a special act of Congress for his distinction in this field and in the field of aviation.

Another naval officer who participated in arctic exploration was Lieutenant Commander Fitzhugh Greene, who in 1913 accompanied Donald B. MacMillan in the Crocker Land expedition of 1913-17. Greene returned in 1916. MacMillan spoke highly of him as an indefatigable snow and ice traveler. Although he was not engaged actively in the Arctic, afterwards he wrote entertainingly of his experiences and in 1926 published a life of Peary. Lieutenant Commander Isaac Schlossbach, U. S. Navy, accompanied Byrd on one expedition. The U.S.S. *Bear*, which transported the Government Polar Expedition of 1939-40 under Admiral Byrd to the Antarctic was commanded by Lieutenant Commander (now Commander) Richard H. Cruzen, U. S. Navy, and the medical officer was Commander Ladislaus L. Adamkiewicz,

(M.C.) U. S. Navy.

MacMillan himself served in the Navy as a Chief Quartermaster in World War I and then as an officer in the Naval Reserve. Between 1921 and 1941, when he was recalled to active duty, he made no less than nineteen arctic journeys into Baffin Land, Ellsmere Land, Greenland, and Iceland, and although these were under private auspices, his connection with the Navy makes it justifiable to class him as one of the Navy's arctic explorers.

This subject of polar exploration by our Navy or by its officers and men has taken on a new interest at this time when a world-wide "Five Ocean" war makes naval bases and sea routes in the Arctic and Antarctic a matter of importance. Alaska alone and its waters offer a vast field for exploration and enterprise and the geographic and hydrographic information would be matched by the training received in operating under arctic conditions of weather and climate. The same thing is true as regards Greenland, Iceland, Jan Mayen, Spitsbergen, and even Franz Josef Land. Even the Antarctic Continent is not an inconceivable base in a war in all oceans.

Author CAPTAIN LOUIS H. RODDIS (M.C.), U.S.N. writes:

I am Editor of the *U. S. Naval Medical Bulletin* and have been greatly interested in the history of medicine, particularly naval medical history, and have recently published a book on the subject, *A Short History of Nautical Medicine*. It was the history of scurvy and the influence of this important disease in nautical medicine which led me to the study of some of the polar voyages and from this to the part played by the Navy in polar explorations.

Old shipmates will also remember me as an ardent amateur botanist.

It is of interest to briefly list the more important polar discoveries and achievements which are closely linked with the United States Navy, either actual expeditions of the Navy or else carried on in naval vessels, under general naval auspices, or at least in which the leader was a naval officer.

- (1) Establishment of the fact that a land mass of continental proportions existed in the Antarctic (Wilkes and a naval squadron).
- (2) First United States arctic expedition (De Haven with two naval vessels).
- (3) Discovery of Smith Sound and the channel between Greenland and Baffin Land and Ellsmere Land, the American route to the North Pole eventually used by Peary. (Kane, the leader, was from the United States Navy.)
- (4) Discovery that Wrangell Island was not the southern end of an Arctic Continent. (*Jeanette* Expedition under DeLong and with naval personnel.)
- (5) Discovery of North Pole (Peary—leader from the Navy).
- (6) Flights over both Poles (Byrd—leader from the Navy and part of equipment and personnel from the Navy).

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U.S. Force Now 72 Miles From Kiska, Occupying Amchitka Island

WASHINGTON, May 7—The islands of Amchitka and Adak in the Western Aleutians have been occupied by Army-Navy expeditionary forces that have built up military positions, including air fields, thus making possible the punishing raids on the Japanese-held bases of Kiska and Attu, during the past two months, the Navy announced today.

From information disclosed here, the occupation of the two bases—Amchitka in the Rat Island group that also includes Kiska, and Adak, one of the Andreanof Islands, last October—were bloodless expeditions, unopposed by the Japanese.

The principal news in the announcement of the occupation of Adak was in the naming of the island, for in a communiqué issued last October the Navy disclosed that we had taken positions in the Andreanofs.

The first landing at Amchitka took place Jan. 12. The Navy said that the announcement had been withheld "until our positions were fully consolidated."

"In the occupation of Amchitka," the Navy said, "the weather presented the greatest obstacle, causing damage to landing craft and severe privation to personnel in the early stages of the operations."

Adak, 457 miles west of the big Alaskan base at Dutch Harbor, is mountainous, with some of its peaks perpetually snow-covered.

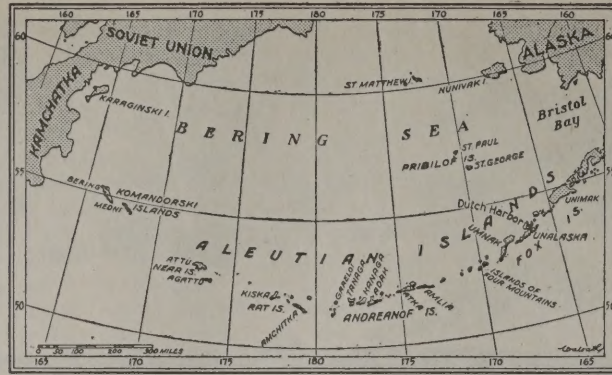
Adak has several harbors affording good anchorage, including the Bay of Islands on the northwest; Bay of Waterfalls on the southwest, which is flanked by Cape Yakak, a long flat tableland, and Turret Point; Chapel Roads, east of Bay of Waterfalls, and Kuluk Bay, on the east side. The island lies 183 miles east of Amchitka, 244 miles from Kiska and 435 miles from Attu.

Amchitka, 633 miles west of Dutch Harbor, is a long, narrow island whose northwest end rises to 1,008 feet in height. The eastern extremity forms a peninsula with a reef jutting out for two miles.

Constantine Harbor, near Amchitka's easternmost points, where the Army-Navy expeditionary force landed, has a good anchorage of eight to ten fathoms.

The locations indicate the value of the islands as stepping stones from our major Alaskan base, and their occupation shows a closing in on the foe at Kiska.

The Amchitka landing force left transports in the cold Bering Sea and went ashore in landing boats. The troops had jeeps and other mechanized equipment and, of course, a great volume of necessary supplies and arms.



FISH-PACKING RUSE HID ALASKAN BASES

Japanese Invasion Attack on Dutch Harbor Last June 3 Bailed by Secret Airfields

By The Associated Press.

ANCHORAGE, Alaska, Feb. 3.—AN ADVANCED ALASKA BASE, March 16—The fact that Dutch Harbor, the Navy's Alaskan stronghold, did not suffer a Japanese surprise attack such as hit Pearl Harbor was due in considerable measure to the creation of two fake salmon packing companies.

These firms had no entity as the salmon canneries they purported to be. But they were very real covers for one of the Alaska Defense Command's most remarkable achievements—the secret construction of two airfields to guard Dutch Harbor from just the sort of attack Japan tried to make upon it last June 3.

The camouflage worked perfectly. The enemy's approach to the naval base met with completely unexpected aerial opposition and his confusion was obvious. For had not intelligence reports to Tokyo Imperial Headquarters asserted there was no United States airfield within 800 miles of Dutch Harbor?

There were two carriers, two or three cruisers, eight destroyers and four transports in that Japanese force—perhaps as strong an armada as that which struck at Pearl Harbor six months before—and palpably intent on invasion. Those transports never sighted Dutch Harbor and the whole attack resolved itself into a purely aerial stroke at the naval base.

Now, nine and a half months after the event, Major Gen. Simon Bolivar Buckner Jr. of Munfordville, Ky., head of the Alaska Defense Command, has disclosed the story of the stratagem and its success. General Buckner himself directed the scheme, but he attributed a good share of the "final finagling" to a member of his staff, Colonel Lawrence V. Castner of Oakland, Calif.

"Alaska was the nation's military stepchild," said General Buckner. "Even after Pearl Harbor our

so publicized naval stronghold of Dutch Harbor did not have one protecting air field within 800 miles, not one. The Japs knew this. Naturally I was concerned because my business is the defense of Dutch Harbor and Alaska.

"I selected Umnak and Cold Bay as two satisfactory air-base sites. Umnak is sixty miles beyond Dutch Harbor and Cold Bay is eighty miles closer to the Alaskan mainland.

"When we had appropriations and permission to begin airfields, the question was to keep them secret and not to arouse Jap suspicion."

This problem was solved in part by interning the nearly 200 Japanese in Alaska immediately after Pearl Harbor.

"To help the deceit along," General Buckner continued, "Colonel Castner named them [the airfield sites] Blair Packing Company and Saxton & Co., while in all official correspondence the jobs were titled Project 'A.' Umnak and Cold Bay mail was addressed to these fake companies and our radio messages conformed to the picture.

"Engineers under the supervision of Colonel Benjamin B. Talley worked furiously despite ice and high gales to install a steel landing mat within two months.

"The Japs didn't give us much more than that time, but when they came in force sneaking down the Aleutians under cover of heavy fog June 3 we had pursuit and bomber planes on two fields.

"Because they brought four transports loaded with troops, it is a fair assumption that they intended occupation. They attacked Dutch Harbor with carrier planes and it would have been a good choice for their landing operations.

"However, in the midst of their well-planned assault, the Japs found themselves attacked from behind by land-based pursuit planes and bombed and torpedoed by land-based bombers. That upset their rickshaw. Their spy work, which made Pearl Harbor possible, had failed."

Alaska Highway Bars Tourists

EDMONTON, Alta., June 17 (CP).—The Alaska Military Highway will not be open for use of tourists or for promotional enterprises of any kind while it is under the control of the United States Army, it was announced today by Captain F. C. Bishop, public relations officer for the Northwest Service Command.

RAVENS IMITATE PLANES

Aleutian Birds Adopt Their Tactics, Yarning Officer Says

AN ARMY OUTPOST IN THE ALEUTIANS (UP)—Even the wild-life in the Aleutians has been militarized, according to Captain Aaron Blewitt of Cul De Sac, Idaho, company commander of a unit camped in a wild valley on the slopes of an Aleutian volcano.

"Since our arrival here," Captain Blewitt said, "the blue foxes have learned to stand in the chow line and the ravens are beginning to fly in military formations."

The men in Captain Blewitt's company support his assertions that the fat, playful, highly intelligent ravens imitate the manoeuvres of fighter planes based in the Aleutians. They maintain that the birds not only fly in echelons and peel off in attack dives but they also occasionally poke fun at the air corps by making extremely bumpy and unbirdlike landings.

"But the best stunt they have pulled off here," Captain Blewitt said, "was when they gave our terrier mascot a shellacking. They circled over him in an echelon of echelons and came down one at a time, clawing the pup and whacking him so hard with their beaks that half the company had to knock off work to rescue him."

Col. Talley Awarded DSM For Alaska Airfield Job

By The Associated Press.

ANCHORAGE, Alaska, Feb. 3.—Col. Benjamin Talley, 39-year-old engineer officer, who has supervised construction of all Army installations in Alaska during the last two years, is the first member of the Alaska Defense Command to win the Distinguished Service Medal in this war.

The citation noted that "the speedy and efficient completion of a certain airfield was largely responsible for failure of the Japanese expeditionary force to penetrate one of our main positions."

Col. Talley's home is Mangum, Okla. He is a graduate of Georgia Tech and worked briefly as an engineer at a Pittsburgh electrical plant before joining the Army.

Frozen Food Sent to Alaska

'Coals to Newcastle' Theory Fails Where Vegetables Are Concerned

WASHINGTON, June 14.—By sending frozen vegetables to the frozen North, the Army quartermaster corps is not only giving a modern war-time version of carrying coals to Newcastle but also proving there is sometimes good logic in putting the cart before the horse.

Instead of sending fresh or canned vegetables to the troops in Alaska, the Q. M. C. realized that the vegetables would freeze on arrival and be in danger of spoiling; therefore the master minds of frozen foods decided to freeze them first.

Attu Bleak, Rocky, Treeless, Foggy



This is an American pilot's view of mountainous Attu looking east from Cape Wrangell (foreground), westernmost point of the island.

Rocky, treeless Attu Island is approximately 30 by 40 miles in size and is the most westerly of the bleak Aleutian Islands.

Its population in 1936 was 41 persons, all Aleuts of mixed blood. The islanders saw white men only on periodic visits by the Coast Guard, traders and scientific parties.

Isolated By Fog, Gales.

Geography and the weather have combined to keep Attu in virtual isolation. There are many offshore reefs and navigation is also made hazardous by almost continual fogs. Gales are frequent.

Until the Japs came, the chief of the islanders kept the outside world informed of weather conditions by means of the radio telephone which the Coast Guard had taught him to operate.

Trapping and fishing were the island's only industries. The Aleutian blue fox was taken during December and January and provided the natives with their only income. Traders who arrived by boat to pick up the pelts took staples and other things needed by the natives. Fish, caught in nets, were divided among the inhabitants for food.

There was no farming because the growing season was too short.

Church, But no Priest.

In spite of the primitive life, there were a number of well-built houses on the island. One even was so large that it contained two schoolrooms, two kitchens and a modern bathroom.

Then there was a Russian Greek Orthodox Church, well constructed and containing icons, old Russian

Landing in Massacre Bay Recalls Harbor's Naming

WASHINGTON, D. C., May 20.—Massacre Bay, where the Yanks landed on Attu, indents the southeast coast of the island. Massacre Brook flows into the bay from an inland lake, cutting a swath through Attu's bare, treeless mountains that rise at places over 3,000 feet, says the National Geographic Society.

The Bay was named Ubienna (Russian for "massacre") in 1802, commemorating the massacre of 15 Aleuts by Russian fur hunters in 1745. After American possession of Alaska in 1867, Ubienna Bay became Massacre Bay.

Holtz Bay, another reported landing place on Attu, indents the northern coast just west of the island's main harbor of Chichagof.

oil paintings and religious books brought from Russia many years ago. There was no resident priest and religious services were conducted by the native chief, who was elected by the inhabitants each year.

While the majority of the natives lived in small frame houses, there were a few still dwelling in the old-type semi-subterranean earth houses. The latter had been modernized, however, by board floors and walls, stovepipe chimneys and windows.

TESTS COLD-PROOF SUIT

British Navy Has 'Two-Piece' Suit for Arctic Wear

A completely new type of clothing for use in extremes of cold, designed by a naval officer who has been an Arctic explorer, is being tested by the British Royal Navy. It is a two-piece garment, both pieces of which have a double inner lining of wool covered with a wind-resisting material.

The trousers have a draw string at the waist and at the ankles. The upper garment is made as a smock and has no buttons. It has attached a hood lined with a type of fur specially imported for the purpose.

For the feet there are slippers of several layers of wool over woolen stockings, the object being to achieve insulation and thus warmth. The gloves are made in two pieces, the windproof outer part covering a lining of wool.

Reefs Off Attu Make Invasion By Sea Difficult

WASHINGTON, May 14 (UP).—Invasion boats approaching Attu Island in the Aleutians must traverse reef-filled waters and strong currents. Soldiers gaining a beachhead on the barren island would encounter difficult ground and swamps.

Air views of Attu show that from the shore conical snow-capped mountains rise precipitously. These, like the other mountains in the Aleutian chain, are the peaks of a curved line of mountains in some places more than 23,000 feet high. The peaks are the islands; the rest of the mountains is under the sea.

Information available concerning this westernmost of the Aleutians indicates that almost the entire shoreline of the twenty-by-thirty-mile island presents difficult problems for a landing force.

The shore is indented with deep bays and inlets, but there are numerous rocks and reefs offshore. The bays are mainly on the south coast. Two provide some protection for ships; one, on the northeast shore, is Sarana Bay; the other, on the north coast, is Chichagof Bay.

Sarana Bay is flanked by foul ground for a mile to the east, while the south shore is abrupt. Chichagof Bay is small and can accommodate only ships of less than fourteen-foot draft. Strong currents sweep the indentation. The bay is surrounded by rocks and there is a small village at its head.

Natural cover on the island would be almost completely lacking. Most of Attu is covered with a monotonous heath. Crowberries abound, but there are no trees.

Underground streams flow through shallow valleys, streams which are sometimes separated from the surface by only a thin crust through which an unwary soldier might fall.

It is one of the rainiest spots on earth—the yearly humidity average being about 90 per cent. Continual fog envelops the area. There may be 250 rainy days a year and as few as eight clear days. The average summer temperature is about 50 degrees Fahrenheit, with a maximum of 66. The average winter temperature is about 12 degrees.

Kiska Volcano Again Active

HEADQUARTERS, ALASKA DEFENSE COMMAND, June 14 (Delayed) (AP).—Returning bomber pilots reported today the Kiska volcano has become active, adding to the troubles of the Japanese occupying that Aleutian Island. Pilots who have used the volcano on the north end of Kiska as a navigation point said the crater is smoking, and they saw some lava flowing down the sides of the peak.

At the head of Chichagof Bay is Attu village, the island's only inhabited site. Sarana Bay, final possible anchorage on Attu, is on the northeast corner of the coast. All these bays lie open to weather and seas.

Fogs Blanket Island

Attu village, normally with perhaps 50 inhabitants, was visited once a year by Coast Guard Cutter with provisions. It was not unusual for the cutter to stand off for several days before daring to enter the bay and anchor. Then it could often remain in the "harbor" only a few hours for fear of damage by fog-hidden rocks.

The Aleutians are the meeting place of the warm waters of the Japanese Current and the frigid Bering Sea. The same thing that happens when you spill cold water on a warm stove occurs there every day. Magnified a millionfold, this reaction accounts for the bad weather of the area—dense fog, cold, dripping mist, and treacherous ocean currents.

Through geologically part of North America, Attu is in the Eastern Hemisphere—west of 180 degrees. The island is so far west that in June, when the sun is setting on Attu, it is rising at Bangor, Maine. Thus Americans can say that the sun is always shining on Uncle Sam's possessions.

Auto Starter To Defy Polar Cold Is Sought

**Base Is Established in
Northern Canada to
Check Motor Systems**

DETROIT, Jan. 23.—Automotive engineers have begun a campaign to conquer the effects of frigid weather on motors, and reports received by the Automotive Council of War Production here indicate that vehicles soon will start and run as easily under conditions of extreme cold as they will during warm weather. Under direction of the Society of Engineers' War Engineering Board, the manufacturers of tanks, combat cars and other military units have pooled their knowledge to work out the most effective system. Tests are being conducted in "cold rooms" where Arctic conditions are simulated.

"Working closely with United States Army engineers, automotive specialists also have developed methods for improving starting and steering, for protecting electrical systems against cold and for heating engines and batteries," according to a report on data obtained by the council.

"The automotive engineers undertook the assignment of providing a quick starting system for the United States Army early last March, in anticipation of winter fighting on the various Arctic fronts," says the report.

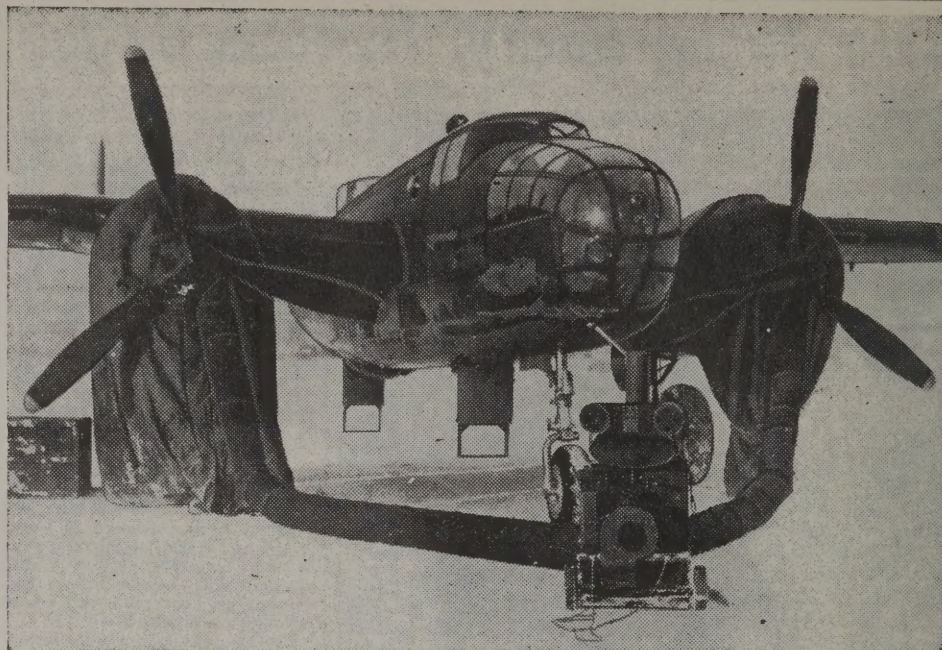
"To get first-hand information on actual running tests, the engineers, in addition, are making observations at a winter test base in one of the coldest areas of Canada. This base, established by the United States Army, is equipped with a machine shop, welding equipment and maintenance supplies. Many types of tanks and military vehicles have been shipped up there for the tests.

"One of the most difficult problems to be solved at the camp is that of lubricating both engines and chassis in extreme cold. Attempts are being made to develop a lubricating oil with a pour point low enough to eliminate the need for dilution.

"Some idea of the frosty conditions encountered can be gained from a listing of wearing apparel which automotive engineers take to the Canadian camps. The list includes:

"Two suits of long woolen underwear, three weights of socks, ski boots, mukluks, snow packs with wool-lined rubber feet and leacher upper tops, two pairs of ski pants over which socks and boots are worn, at least two woolen shirts, ear muffs, wool helmet that tucks in, covers face and has slits for the eyes; fatigue cap, heavy woolen mittens, finger and leather gloves, goggles, parka and a heavy turtle-neck or V-neck sweater.

"Thus attired, engineers are now conducting field tests of theo-



PREHEATING SAVES TIME AND ENGINES IN ARCTIC—This B-25 Mitchell bomber is shown being prepared for service, its engines closely swathed in padded canvas hoods. They are being pre-heated by gasoline-fed heaters. Motor-driven fans blow hot air through pipes to the engines and the heat is confined to points where needed. Engines are brought to the proper flying temperature in from 15 minutes to an hour, depending on the degree of the outside cold.

—Army Air Forces Photo.

Soldiers in Cold Regions Get Clippers for Beards

JERSEY CITY, N. J., Jan. 28 —It needn't be "cold enough to freeze your whiskers off" to keep the faces of Uncle Sam's fighting forces in frigid climates clean-shaven. The Army Quartermaster Corps is supplying them with beard clippers for use when "extremely low temperatures make shaving inconvenient and possibly dangerous," according to an announcement today by the Jersey City Quartermaster Depot.

"It is necessary to keep the beard clipped to prevent formation of ice in the whiskers," the announcement explained.

The beard clippers for men in cold areas are an addition to a barber kit, which has been developed by the Quartermaster Corps and is now being supplied to Army units in overseas areas where professional barber service is not available.

ries that have survived the punishment to which they were initially subjected in the laboratory cold rooms.

"The benefits of such research are not confined to the Arctic, however. For lessons thus learned are often valuable in the tropics."

"Airplanes, for example, are now being built with self-contained and often fully automatic mechanisms which enable them to take off in tropic temperature, where cooling is the essential problem, and climb quickly into the stratosphere, where sub-zero temperatures prevail."

Missing Aviator Found in North

CHARLOTTETOWN, Prince Edward Island, March 11 (P)—The finding of Capt. Jimmy Wade, veteran Canadian commercial aviator who disappeared three months ago on a flight to aid the injured crew of a United States Douglas bomber in the Far North, was announced by Premier Thane Campbell in the Legislature yesterday.

Captain Wade, a Charlottetown pilot for Maritime Central Airways, spent four days in a rubber dinghy with a companion in a remote region, the Premier said.

After reaching land the two men survived several more days of "very severe temperatures" before reaching an outpost of civilization and, according to the Premier, they are on their way home.

So isolated is the wilderness area of ice and snow where they landed that first information indicated it might be midsummer before Captain Wade could get back to Charlottetown, the Premier declared. But it appeared now he would be back shortly—about three months after leaving.

Edible Wild Alaskan Plants

For the protection of aviators forced down in the Arctic, information has been solicited by the Army from the herbarium of the University of California.

Eskimos in ice-bound regions have learned how to sustain life in extraordinary ways. A seaweed, known as fucus, is eaten raw, but the natives prefer to wait until

spring when the herring roe laid on the fucus makes it more palatable. It is plentiful in the southern Bering Sea.

Dr. Herbert L. Mason, curator of the University herbarium, who visited Alaska in 1932 saw the Eskimos also eating the sedum rhodiola, familiar to rock gardens as one of the family of "hen-and-chickens." It is a little plant with clusters or rosettes of thick leaves, and called "nunivak" by the St. Lawrence Island Eskimos. It grows in the greater part of Alaska, also in Europe.

Gathered in sealskin bags it is doused with seal oil and allowed to ferment. When apparently unfit for human consumption, says Dr. Mason, the natives eat liberal quantities of it.

Lucky Dog Now in Army

**Admiral Byrd Camp Pet Survived
Fire and Fall in Antarctic**

CAMP HALE, Col., April 14 (P).—Lucky at last has lived up to his name. When fire destroyed the blubber house at Rear Admiral Richard E. Byrd's Antarctic camp in 1940, Lucky, newly born Alaskan malamute pup, was inside—but he survived. Two weeks later he fell into a deep pit, breaking both forelegs. That's when he acquired his name. "He's lucky to be alive," the scientists concluded.

Back in the United States he was separated from his adopted master, Malcolm C. Douglas, of East Orange, N. J., meteorologist with Admiral Byrd. Now Lucky's serving the Army at Camp Hale. So is a veteran dog-team driver—Private First Class Malcolm Douglas. The reunion was joyful.

U. S. Soldier Outslugs Bear In River Fight

Gen. Sturdevant Tells of Battle During Building of Highway to Alaska

Brigadier General C. L. Sturdevant, the man who planned the American end of the 1,671-mile Alaskan Military Highway, was talking to reporters June 17 at the Columbia Broadcasting System Studio Building, 49 East Fifty-second Street, telling what he could of the big construction job, when a drool look came over his face.

"Here is a story," he said, "and they tell me it's true. Two sergeants from an engineers' regiment working on the road were swimming in a river up there in Canada one day. They were splashing around when a bear jumped into the water from the opposite bank.

"The bear started to swim toward them. One sergeant jumped right out of the water. But the bear caught the other sergeant where the stream was about waist deep.

"This second sergeant didn't know what to do. So he turned around and lammed the bear a good one on the snout. That's a very tender spot on a bear. The old bear reached over and clawed the sergeant across the forehead and chest. The sergeant slugged the bear again on the nose and the bear let out a yell and swam away.

"Now to the best of my knowledge that story is true. I heard it was substantiated by the sergeant who stood on the bank and watched it, and by a medical officer who bandaged up the clawed sergeant.

"Well, at the time it happened up there, it was sent over to Public Relations but they said it couldn't be used because it might scare the mothers back home who would worry if they thought their boys had to fight bears and build a road at the same time."

General Sturdevant, now on duty in Washington as Assistant Chief of Engineers in charge of Troops Division, said that during the road building job the constructors—10,000 troops and 6,000 civilian laborers—averaged eight miles a day in completing the road between April and Nov. 15, 1942. They bridged 200 streams, ranging from tiny creeks to 1,000-foot rivers, in conditions varying between 35 degrees below zero, to dusty heat, depending on the season.

Many of the log bridges went out this spring in the ice jams, General Sturdevant said, but they are being or have been repaired, and the trucked supplies which rolled over the road all winter are still rolling.

During the job, he recalled, the men made good money but had no place to spend it in the wilder-

QUITS BIRDS TO FIGHT

Artist Son of Capt. Scott Chases German Ships

Captain Scott, the Antarctic explorer, had one ambition for his son—now Lieut. Comdr. Peter Malcolm Scott, the naval correspondent of The London Daily Herald relates.

"Make him interested in natural history," he wrote to his wife in his last letter before he died. "Keep him in the open air."

And the boy Peter grew up to be an ornithologist and one of Britain's best-known painters of wildfowl.

As a man he lives in loneliness. His home in England was a disused lighthouse on the Wash; abroad he spent months searching the Persian coast of the Caspian Sea for the red-breasted goose—a rare bird which he wanted to sketch and paint.

Then came war and Peter Scott left his lonely lighthouse, evacuated his precious birds to friends for the duration, and joined the light coastal forces.

The man who shunned the noise and bustle of the cities for a quiet life on lonely islands and marshes now races high-speed midget warships across to Hitler's doorstep, shooting up anything belonging to Germany he finds afloat.

He was mentioned in dispatches for gallantry at the Dieppe raid, scenes from which he later painted.

CROPS RAISED IN ARCTIC

Russian Experiment Reported as Great Success

Sowing in the extreme north of the Soviet Union will be considerably increased this year, according to the People's Commissariat of Agriculture of the U. S. S. R. The first agricultural experiment station, in Khibiny, beyond the Polar Circle, laid the foundation of northern agriculture. Several thousand hectares of land are now cultivated in the stern weather conditions.

Dozens of agricultural stations raise winter wheat, potatoes and many kinds of vegetables. Oats and barley are grown even at the sixty-eighth parallel. Many collective farms harvest twenty or even thirty tons per hectare of potatoes of early ripening varieties. It is stated that potatoes sown as far north as the Kola Peninsula are not affected by any diseases. Vegetables—onions, lettuce, parsley and fennel—yield a good harvest, both in hothouses and in the open ground.

Especially suitable for growing in the extreme north, it appears, is the frostproof variety of potatoes whose leaves remain green even at 4 degrees below zero centigrade, and an early ripening variety of peas which can be raised in the open.

All along the route they bought out the whole fur stock at every Hudson's Bay Company trading post and, toward the end, the trading posts were importing furs from the United States to sell to the late comers.

Two New Military Colleges Sprout Not Far From the Arctic Circle

SEATTLE, Wash., March 3 (AP)—You won't find them in any directory of educational institutions, but the College of the Aleutians and Kodiak University rank as the two newest American institutions of higher learning.

They are a possibly far-reaching innovation in education of the men at the nation's military outposts.

Capt. M. L. Witherspoon, Naval recreation and Morale Officer of the Alaska Sector, told of the "newest thing in the Navy" on a visit here March 4.

"We expect it to produce wonderful results," said the veteran of a quarter century's service in the Corps of Chaplains.

"Courses will be offered in any high school or college subject that three or more students elect to take. We have the books required for a wide field of subjects.

"Classes will be held evenings in mess halls, barracks and special huts.

"There aren't any girls around, and I'm sure the boys will study

harder than they would in any other environment."

Captain Witherspoon said the program is a forerunner to a world-wide correspondence school system which the Army and Navy, in conjunction with universities and colleges, are contemplating.

"Correspondence courses will be offered which will lead toward degrees in any institution of higher learning which the student elects," he explained.

"These courses will be available to anyone in the armed forces. Hundreds of men in Alaska already are applying for them. It will be called the Armed Forces' Institute."

Kodiak University has been in operation for two weeks. The College of the Aleutians is just starting at Dutch Harbor, with Lieut. William H. Price, a Swarthmore man, in charge. Lieut. C. F. Andrews, a Princeton graduate, is Dean at Kodiak. All instructors will be university graduates.

"New as it is," the Captain said, "Kodiak U. already has 70 students in celestial navigation and 50 in Russian."

THROW OUT SKELETON TO USE ALEUTIAN BUNK

Army Corporal and Eskimo Gain Shelter From Cold Wind

HEADQUARTERS ALASKA DEFENSE COMMAND (UE)—Cpl. Clyde A. Peterson of Sitka, a member of "Castner's Cutthroats," the platoon of combat scouts organized by Col. L. V. Castner for service in the Aleutians, has added his bit to the growing legend of his outfit.

Seeking shelter recently in the outer Aleutians where they were doing reconnaissance work for Army Intelligence, Corporal Peterson and an Eskimo private named Apodruk found a "barabara," or Aleut sod hut, still standing at the rim of an ancient village. Peterson says that since they were cold, tired and hungry and a bitter, snow-laden wind was howling in from Bering Sea, they crawled into the old dwelling and prepared to spend the night.

But the first thing they saw on making a light, Peterson says, was a time-yellowed skeleton lying on a bunk, wrapped in rotted tatters of sealskin and with a great whale harpoon clutched in its fleshless hands.

"Gosh, what'll we do?" asked Apodruk.

"In a case like this, chum, there's only one thing to do," Peterson replied grimly. "We need the bunk more than he does. So out he goes."

Peterson states that inasmuch as the bunk was wide enough for two, he and Apodruk spent a fairly comfortable night after they had dispossessed its skeleton occupant.

Road to Alaska Opens Up Deposits of Oil and Coal

Development of Resources Is Planned Along Highway

WASHINGTON, Feb. 21 (UP).—The 1,671-mile long Alaskan defense highway, built at record speed through the Northwest wilderness as a war emergency project, has opened up a vast area containing rich oil deposits and huge reserves of coal and strategic minerals, government officials said today.

They estimate that oil-bearing sands in the area cover an expanse of from 10,000 to 50,000 square miles and contain deposits of "reasonably good quality" oil.

While no suitable method of development has been devised yet, Canadian authorities already have produced "considerable quantities" in experimental operations close to the Alcan Highway, and officials hope production difficulties "can be solved rapidly and with some degree of certainty."

Deposits of high-grade coal, estimated at 600,000,000 tons or more, extend all along the highway. Bureau of Mine officials described them as of "a good grade of bituminous coal completely undeveloped."

Silver Paper Warms Britain's Arctic Ships

Ships used in the British Navy for service in the Arctic are being lined with silver paper, it is reported in London.

Ships already treated with silver paper, which is unaffected by climate, have provided warm quarters for their crews when they proceeded to the Arctic.

Engineers Told How U. S. Built Alcan Highway

**Obstacles to 1,765-Mile
Army Road Described by
Men Who Overcame Them**

Technical details of construction work on the Alcan Highway, the 1,765-mile military road linking the United States with Alaska, were discussed Jan. 20 by the men in charge of the project, speaking before the ninetieth annual meeting of the American Society of Civil Engineers. The meeting was held at the Engineering Societies Building, 33 West Thirty-ninth Street, and was attended by 1,100 members of the society.

How Army and civilian engineers drove the highway across rivers and mountains in one summer season of less than five months was described by Brigadier General C. R. Sturdevant, Army Assistant Chief of Engineers in charge of Army work on the road, and by Thomas H. MacDonald, United States Commissioner of Public Roads, who supervised the civilian portion of the job.

The principal obstacle, both speakers agreed, was the complete wildness of the country and the relative inadequacy of the port facilities at Skagway, Alaska, through which all equipment for the northern end of the job had to pass.

The first problem raised by the terrain lay in the fact that most of it was densely forested with small trees, General Sturdevant said, but this was overcome by using large bulldozer tractors to batter through the growth.

The question of elevations was less easily solved, Mr. MacDonald said. Not only were some of the passes 3,000 feet higher than they were represented to be by survey maps, but the approaches to them were impassably steep, he explained. One of the heaviest parts of the work, he said, lay in reducing grades as sharp as 35 per cent to negotiable inclines of 10 per cent.

Since supply trains were strained to the limit merely carrying food and equipment, it was impossible to import building materials to the project. Hence, more than 100 bridges, some of them across rivers a third of a mile wide, were built of logs. While both General Sturdevant and Mr. MacDonald expressed satisfaction with the performance of the bridges during the construction work last summer, neither was very confident that many would survive the heavy floods and avalanche-like ice-packs expected along the route next spring.

Little Surveying on Alcan Job

TORONTO, Ont., Feb. 12 (UP).—Very little surveying was done in the building of the Alcan Highway and the job was carried out

Dogs Help on Sentry Duty in Alaska



Private First Class Richard Large, left, of Hoquiam, Wash., and Corporal Robert Robinson, of Las Vegas, Nev., are accompanied by their Army dogs on sentry duty at an advanced base in the Aleutians

in a highly irregular manner, but the result was successful, Brigadier General C. S. Sturdevant, Assistant Chief of Engineers, U. S. Army, said here in an address last night. General Sturdevant said that unit commanders often chose the general route of the highway, although this was highly irregular. The road, he added, progressed on an average of three miles a day.

Road to North Now Named 'Alaska Military Highway'

By the Associated Press.
WHITEHORSE, Yukon Territory, June 17.—Brig. Gen. James A. O'Connor of the United States Army's Northwest Service Command has settled the controversy surrounding the name of the Alaska highway by announcing that the name "Alcan" has been abandoned and the 1,600-mile lifeline to the North would be known officially as "the Alaska military highway."

"By way of explanation, we called it the 'Alcan' highway because we wanted to include in the name of the road some mention of our Canadian allies, on whose land much of the highway has been constructed," he said.

"Yet Canadians themselves took the lead in urging us to name the road the Alaska highway."

"From members of Parliament, from Canadian newspaper editors, from average citizens of Canada, I have received letters advocating that the road be simply named Alaska military highway. Public opinion in both the United States and Canada seemed to be nearly unanimous in this respect."

SEES NEW WORLD ERA WITH ALCAN HIGHWAY

**Gen. O'Connor Tells Canada of
His Northwest Passage**

OTTAWA, Ont., Feb. 18 (Canadian Press).—The Alaska Highway may be "the new Northwest Passage" linking America and Asia, Brig. Gen. James A. O'Connor, commanding the Northwest Service Command of the United States Army, said tonight in a radio speech.

The general, chief builder of the road, came here to present to Prime Minister Mackenzie King two mementoes of the opening of the highway, a blade of the scissors used in cutting the ribbon at the formal opening ceremony last year and the other a copy of the journal of the leader of the first exploration party to penetrate the country served by the highway—Colonel Charles S. Bulkeley, who surveyed for a projected telegraph line to Asia eighty years ago.

"Transportation developments of immeasurable importance have followed other wars," General O'Connor said. "Perhaps the Alcan Highway as a thoroughfare to Asia and as a conduit to the riches of Alaska and the Yukon, is destined to be one of the lasting and significant results of the conflict in which the whole earth now is engaged."

General O'Connor said the period of pioneer construction on the highway is over. The job now is improvement, maintenance and operation.

The lowest temperature experienced so far was 74 degrees below zero. This was near Watson Lake.

ARMY SETS UP WIRES OF 3-WAY ALASKA LINE

**2,000-Mile Service to Carry
Voice, Telegraph and Radio**

WASHINGTON, May 24—A 2,000-mile Army Signal Corps telephone line from Edmonton, Alberta, to Fairbanks, Alaska, capable of simultaneously carrying vocal, telegraphic and radio messages, is "nearing completion," the War Department disclosed today.

Known as the Alcan Telephone Project, a part of the Alaskan communications system, the line will provide a direct link for the department in Washington with the Northwest Service Command.

The War Department said that the line would carry more than one radio message and one telegraph message at a time without interfering with conversations. The radio messages are sent by a special transmitter, utilizing low frequency waves, which travel over the wire rather than through the air, it was explained. There will be seven talking channels and fourteen teletype channels.

"The carrier-equipped system," as it is known, will be the longest of its kind in the world, the department said, and will fill a military need of the United Nations.

Yukon to Get New Road

**U. S. Building 145-Mile Route
From Haines to Territory**

FAIRBANKS, Alaska, May 12 (CP).—A new 145-mile auxiliary route to funnel supplies for prosecution of the war in the Alaska area is under construction by United States Army engineers from Haines, Alaska, to a point on the Alaska Highway 100 miles to the west of Whitehorse, Yukon Territory, officers of the United States Army here disclosed today.

The road winds across the Chilkoot Pass from Alaska into the Yukon, and for forty-two miles follows the remnant of the old Jack Dalton Trail, named after the fabulous character of the gold-rush days who drove a herd of cattle over approximately this same route in 1898. He sold the beef at such fancy prices in Dawson City that he returned again, and again with additional herds, establishing a route that existed for a generation from Haines to Dawson City.

Ottawa, Feb. 1 (Canadian Press).—Construction by United States forces of a new highway north of the Peace River to the Mackenzie River in the Canadian Northwest was disclosed in the House of Commons today.

(The Peace River rises in northeast British Columbia and flows east to Lake Athabasca, Alberta. Great Slave Lake, about 180 miles north of Lake Athabasca, is the source of the Mackenzie which flows northwest to the Beaufort Sea.)

This route is in addition to the Alaska Highway, which runs through northern Alberta and British Columbia, the Yukon territory and Alaska.

NEW-TYPE MINERS SEEK ALASKA'S ORE

**Federal Crews Thaw Icy Earth
to Obtain Samples of Those
Needed for War Uses**

WASHINGTON, April 3—Following many of the trails blazed by the hardy men of '98, crews of the Bureau of Mines are braving Alaska's wilds in quest of minerals to supply metals for war factories, Secretary Ickes said today in describing the bureau's accelerated program for mercury, tungsten, tin and other strategic materials.

With a view to getting metals for war and to foster a greater development of Alaska's ore reserves, the bureau's crews are moving in by pack train, dog team, river boat and airplane to remote areas of the territory.

The men must build their own camps, clear their own trails and often establish transportation systems. In many instances the ground must be thawed to obtain ore samples, Dr. R. R. Sayers, director of the Bureau of Mines, has informed the Secretary.

Much of the bureau's search centers in the discarded material, or tailings, left at placer operations and dredges by mining men of former days who sought only gold. Many of these tailings contain some valuable tin ore, of which Alaska now leads the nation in output.

The bureau's exploration of the Lost River tin mine on the Seward Peninsula has indicated a substantial tonnage of low-grade tin ore. Tailings are being examined in the Buck Creek-Potato Mountain area, at Cape Mountain, near Tin City, and in the Lost River area, all on the Seward Peninsula, near the Arctic Circle.

Near Sleight, on the Kosokwim River, another Bureau of Mines crew is sinking a shaft in search of more mercury ore. At Moose Creek, near Anchorage, coal prospecting has been done. On Prince of Wales Island in Southeastern Alaska, the bureau is starting a new project for iron and copper ores.

Vitally needed tungsten is being sought near Hyder, also in Southeastern Alaska, and exploratory

Reindeer Meat in Sight To Eke Out the Rations

Game and other delights of the gourmet are helping to solve the food problem. One piece of good fortune is the surplus of reindeer on Nunivak Island, off the coast of Alaska. From fewer than 200 animals the herd has increased in twenty five years to an estimated 19,000, with browse enough to support only about 10,000 reported to be available.

All buck fawns of the 1943 crop and surplus adults are to be killed and the meat supplied to the armed forces and civilians.

MAY SETTLE ARCTIC

**Ex-'Mounty' Says U. S. Soldiers
Will Return to North**

WILLIAMSPORT, Pa. (UP)—The Arctic's "limitless opportunities for man's development" will beckon millions there after the war, predicts former Canadian "Mounty" Sidney R. Montague.

American soldiers who ultimately may be on active duty in the polar regions will thus have a chance "to know the Arctic, to appreciate its opportunities, to welcome its challenges," and after the war will return to the north as permanent residents, Montague believes.

Phenomenally rich in such resources as timber, oils, fish, meat and minerals of all kinds, the north's "frontiers of the future" will offer migrants places in flourishing industries, Montague cited five Alaskan valleys, each of which, he said, possesses eight times the industrial potential of the famous German Ruhr Valley.

Alaska and Canada, Montague said, have room for approximately 180,000,000 more people.

projects have been carried on at Yakobi Island for nickel and on the Kenai Peninsula for chromite.

"Scattered throughout Alaska's 586,000 square miles are many, untapped and unexplored mineral deposits which contain virtually all the strategic, critical and essential war metals," Secretary Ickes said. "The territory thus far has produced nearly a billion dollars in minerals, most of which has been sold."

The bureau's exploratory work in the territory already has resulted in the development of several ore beds, and reports of the mining engineers and metallurgists are transmitted regularly to various interested government agencies, including the War Production Board, the Defense Plant Corporation, the Board of Economic Warfare, the Reconstruction Finance Corporation and the Army and Navy Munitions Board.

In its Alaskan program the Bureau of Mines works closely with the Geological Survey, also of the Department of the Interior, which began its studies of the mineral resources of Alaska in 1895.

Eskimos, Facing New Famine, Donate \$150 to Red Cross

By the Associated Press.

SEATTLE, May 29.—Point Barrow's 550 Alaskan Eskimos face another famine this season, but when the American Red Cross issued its annual Roll Call, they contributed \$150 for the hungry and shelterless of the more favored spots in the world where famine isn't the ever-present threat it is in the Arctic.

"I don't know where they got it to give—they're scratching around to keep from starving, themselves, this year," said Master Sergt. Stanley Morgan today. "But they'd come in—the children especially—and hold out a dime and ask for one of those little Red Cross buttons. And they all wore them, proudly."

The sergeant arrived last night five days after climbing into a plane

at Point Barrow. "The last time I came outside, in 1935, we were a month getting down here by ship," he recalled.

Besides making the Red Cross offering, the Eskimo mothers, supervised by Mrs. Morgan, have knitted many sweaters for American servicemen.

Biggest effect of the war upon the far North has been increased prices. Point Barrow's dozen civilian whites figure an apple costs them 33 cents. When you count the freight.

"I don't know how the natives will get through this year," Sergt. Morgan said. "They had a fair trapping season—it ended May 1—but there hadn't been a single whale even sighted up to the time I left. And it's late for whales, now."

Whales are their main food supply.

America to Run Polar Air Line

By the Associated Press.

MEMPHIS, April 20.—A new "northwest passage" to the Indies—by air over the polar great circle—is the postwar plan of the Chicago & Southern Air Lines, Inc.

The company announced yesterday that it had filed application with the Civil Aeronautics Board to operate trans-Alaskan air service from Chicago to Singapore and Batavia after the war.

This line would link with another from the West Indies to New Orleans, for which application was filed previously, to form the shortest route between the East and West Indies.

Officials estimate that the new route would be 1543 miles shorter than the present air service via San Francisco and would require 22 hours less flying time. The route would cover 8826 nautical miles.

Carleton Putnam, president of the air line, said stops on the proposed route would be Winnipeg, Edmonton and Whitehorse, Canada; Fairbanks and Nome, Alaska; Kamenskoe, Nikolaevsk and Vladivostok, Russia; Iojlo, Korea; Shanghai and Canton, China; Saigon, French Indo-China; Singapore, Malay States, and Batavia.

Eskimos Buy \$15,000 in Bonds

SEATTLE (UP)—Major M. R. Marston, Alaska Defense Command officer, suggested that the Eskimos invest 10 per cent of their income in bonds. An old chief replied, "We put it all in bonds," and asked for \$15,000 worth. "When I told them we needed a road to a certain point the Eskimos said, 'United States—she good,' and ignored a threat of starvation to themselves to complete the road with volunteer labor," Major Marston said.

OLD FILMS WELCOME AT ALEUTIAN POSTS

**Soldiers Grateful for the Only
Entertainment Available**

SEATTLE, Wash. (UP)—Uncle Sam's fighting men out on the barren, wind-swept Aleutian Islands know the meaning of the once widely broadcast advertising slogan, "Motion pictures are your best entertainment."

In tents and barracks from Kodiak to the Andreanofs movies are not only the best, they are about the only entertainment the men have.

Fifteen mobile projecting units, each complete with a generator for creating power where there is no other source, are being shunted throughout the northern fighting front by the Red Cross and the field service branch of the Army.

The projectors and copies of feature films, all reduced to 16 millimeters, the home-movie size, are making the rounds of the camps and remote hospitals, it was revealed at a meeting of the Northwest section of the American Red Cross here.

The projector crews travel to places where men have only their guns for company. Sometimes giving a show means a long trip in a small boat and several hours of walking through mud, Lucian Scott, assistant Red Cross field supervisor for the Aleutian area, told the meeting.

New movies are not available, Mr. Scott said, but the men make no protest. They laugh and cheer at scenes and gags in pictures they all have seen long ago in peacetime.

Once, he recalled, a group of soldiers asked that one of the films be run upside down and backward just for the novelty.

"But they cannot thank us enough," Mr. Scott said. "Even for the old ones."

The Polar Times

Published June and December by the
AMERICAN POLAR SOCIETY,
Care American Museum of Natural History,
Central Park West, at 77th Street,
New York, N. Y.

AUGUST HOWARD, Editor

THE POLAR TIMES highly recommends
"The Polar Record," published January
and July by the Scott Polar Research
Institute, Cambridge, England.

The American Polar Society was founded
Nov. 29, 1934, to band together all persons
interested in polar exploration. Membership
dues are one dollar a year, which entitles
members to receive THE POLAR TIMES
twice a year.

U. S. Army Tapping Canada's Oil; Pipeline to Run to Alaska Highway

By MORLEY CASSIDY

North American Newspaper Alliance.

WHITEHORSE, Yukon Territory, June 18—After months of military secrecy, a wartime Army project that rivals the Alaskan Military Highway in scope and importance, and brings the military value of that highway to full fruition, has been revealed.

The undertaking—already well on its way toward completion—is a vast program for the development of Canadian oil resources, coupled with the building of necessary refineries and other establishments, and the building of a pipeline more than 1,000 miles long through which gasoline and oil can be supplied to the fleets of trucks using the Alaska Highway, to the planes which use the route to Alaska, and to steamships in Alaska ports.

The program is expected to be completed before the end of 1943. Thousands of Army and civilian personnel are already far advanced in the construction.

The project, heretofore little mentioned outside the area of the Northwest Service Command, headed by Brig. Gen. James A. ("Patsy") O'Connor, who is in active charge of the entire undertaking, is known informally as "The Canol Project"—an abbreviation standing for "Canadian Oil."

With drilling actively under way and constantly increasing in extent in the area of Fort Norman, 400 miles northwest of Whitehorse on the Mackenzie River, the project is uncovering an oilfield which has already surpassed all geologists' expectations and gives promise of becoming one of the most important fields on the American continent.

Through the courtesy of General O'Connor I have been privileged to see a part of this vast project and witness the race against time of the roadbuilders and pipeline crews—many of whom were engaged only a few months ago in driving the "big inch" pipeline from Texas to Pennsylvania—as they are pushing this pipeline through sub-Arctic wastes.

"From the beginning," General O'Connor told me, "the possibilities of the project have grown almost day by day."

"When it was undertaken the experts predicted that the wells of the Fort Norman field would yield only a few hundred barrels of oil a day."

"As drilling progressed actual production surpassed these figures by leaps and bounds. Wells have

been drilled in scattered locations in an attempt to outline the extent of the field.

"The field is still not outlined. So far not one well has failed to produce oil."

As closely guarded as any military secret of the war, the project was launched last fall as another of the many activities of the Northwest Service Command.

The story of its progress is an epic of exploration, engineering and construction.

The outlining of a route for the pipeline involved the surveying of hundreds of miles of unexplored territory, and the finding of a suitable pass over the Continental Divide separating the watersheds flowing towards the Bering Sea, and those flowing into the Arctic.

7th Armory Finds Route

This exploration was done in December, January and February, in the face of one of the most severe winters this sub-Arctic country has seen in a generation.

"We sent seven expeditions into the field to find a route to the McKenzie," General O'Connor told me with unconcealed pride in the achievements of his men.

"Two crews went into this wild, mountainous and forest country with horses, and they got stuck and had to turn back."

"Two more tried it with caterpillar tractors, pulling sleds loaded with supplies. They hit snow and rocks that they couldn't pass and bogged down."

"Two more tried it with dog

ARMY LIEUTENANT FOUND PASS TO OIL

Once Baffled by Uncharted River, Party Also Endured Cold of 72 Below

By MORLEY CASSIDY

North American Newspaper Alliance

WHITEHORSE, Yukon Territory, June 19—There was a time, last winter, when it looked as if the Arctic had licked some of the best guides and woodsmen in the North.

The United States Army was battling to find a new pass through the Continental Divide which separates the Yukon and the Mackenzie River watersheds.

sleds and couldn't make it. But we sent out one more with dog sleds. And the seventh crew made it and gave us the route we wanted."

Smashing through the forests and frozen ground with the same driving energy with which he pushed the Alaska Highway through from Dawson Creek to Whitehorse, General O'Connor's forces have already completed the 400-mile highway.

"A pipeline," he says grimly, "is 90 per cent highway. The rest of the job will follow steadily."

Much work has already been done on the pipeline itself. When completed the line will bring crude oil to a refinery which is to be erected in the vicinity of Whitehorse. From here other lines will extend south along the highway and north as far as Fairbanks, Alaska.

The pass would determine the route of the 400-mile-long pipeline of the great Canol project, designed to bring the oil of the Norman Wells field to the Alaska highway at Whitehorse for the fueling of Army planes and trucks.

Six separate expeditions set out. They bogged down. But the seventh, an expedition made up of three toboggans and three teams of dogs, found the pass and got through.

Its leader—who never claimed to be an explorer—was a Philadelphia-born young lieutenant of the Army Engineers, William Hammond, 27 years of age, a slender, wiry young man whose home in recent years has been in Georgetown, Del.

"I had a two-week leave and was waiting at the airport to catch a plane home," Lieutenant Hammond said simply, "when I got word that my leave was canceled. And the next day I flew to Mayo Landing, to get started for the trip to Norman Wells."

Through Unknown Land

Part of the route was known. The rest—the central section, over the summit of the divide that separates the watersheds of the Yukon, flowing into the Bering Sea, and the Mackenzie, flowing into the Arctic Ocean—was completely unknown land.

Lieutenant Hammond was ordered to make an attempt, following a more northerly route that he had seen suggested as "a possibility," reported by Indians, in the writings of an explorer who had cruised some of this country for the Canadian Bureau of Mines. Lieutenant Hammond had discussed the route with Alec van Bibber, who thought it might be feasible.

Lieutenant Hammond reached Mayo Landing on Jan. 10, hired van Bibber as "straw boss" and got together three teams of six dogs each.

As guides and drivers he rounded up the best woodsmen and trailsmen of the Stewart River country—"Kaiser" William Mervyn, who speaks six Indian languages, and his brother, Norman, sons of the trader at Mayo Landing; Albert Pelland, a famous guide, and Lonnie Johnnie, a full-blooded Indian.

With an Army pilot, Lieutenant Hammond then flew to two advanced spots on his intended route, left food caches and returned to Mayo Landing.

The party left Mayo Landing on Jan. 13 after Lieutenant Hammond had written to Brig. Gen. James A. ("Patsy") O'Connor, the fighting commander of the Northwest Service Command, that he "expected to arrive at Norman Wells on Feb. 20."

Temperature Hit 72 Below

Each of the three toboggans—Lieutenant Hammond had decided on toboggans instead of the customary Arctic sleds, as being more likely to get through the drifted snow—was loaded with 500 pounds of provisions and equipment. Much of the food was dried food, and the greater part of it dried fish for the dogs.

On the day after their start, the

HUGE CANADIAN OIL RESOURCES ARE TAPPED



The United States Army has disclosed the existence of a vast oil development project in the Canadian Northwest that will supply fuel for the trucks using the Alaskan Military Highway and for planes and ships in the Alaskan theatre. Drilling is under way in the Fort Norman area (cross) and a 1,000-mile pipeline is being constructed to convey the oil west.

temperature dropped to 60 below. From that day, Jan. 14, to Jan. 31, the warmest day they had was 52 below zero. From that temperatures ranged down to 72 below.

In the deep-drifted snow, Lieutenant Hammond and van Bibber had to "break trail" ahead of the dog teams. Lieutenant Hammond's experience on snowshoes had been limited to a ten-mile jaunt for sport, but he found no difficulty in breaking through.

On the third day out one of the guides brought down a moose and set a record in skinning and butchering it. One hour and forty minutes from the time it was shot moose steaks were being served.

But dogs got the biggest share of all game. The eighteen dogs ate one meal a day, but that meal took a full quarter of moose meat. On the trip the party shot two moose and five caribou to augment the food supply, but they did not stop for hunting even when provisions, at times between caches, began to run low.

Several times the party was stopped, temporarily, by baffling contradictions between sketchy maps and terrain.

Find Uncharted River

Once the party was stopped for a day and a half by a river that was not shown on the maps. It was a big river, and Lieutenant Hammond and the guides debated long over their whereabouts.

Van Bibber finally answered the question by climbing a mountain near the trail. From it, he spotted some distant mountain valleys in which he had once trapped. The party was able to deduce from that fact that they had come to the headwaters of an unexplored river, making a wide sweep to the north a hundred miles beyond where it was supposed to end.

They mapped another mountain river, also a sizable stream, that had never appeared on maps before save as a mouth emptying into the Mackenzie River.

Part of one food cache was gone when the party arrived and Lieutenant Hammond discovered that a mad trapper, sought for months by the Royal Canadian Mounted Police after his escape from an asylum, had found the cache and was hiding in the vicinity. His whereabouts were reported when the party reached Fort Norman, and the man was recaptured.

The loss of the cache left food supplies scanty for a time, and the party pieced out its dried food with ptarmigan and porcupine. The porcupine was no delicacy.

"I ate it," Lieutenant Hammond said wryly, "but I'm not going to give it a testimonial."

Arrive on Schedule

In spite of difficulties, Lieutenant Hammond's party found itself on the morning of Feb. 20 just fifty-four miles from Fort Norman.

To make good the prediction that the party would arrive on that date, the drivers pushed their dog sleds hard on the heels of Lieutenant Hammond and Van Bibber. At 9:30 o'clock that night, the party arrived at Fort Norman.

BISHOP OF ARCTIC URGES ESKIMO AID

Fleming, in Sermon Here, Says
Natives Should Be Trained
to Teach Own People

The Right Rev. Archibald Fleming, Lord Bishop of the Arctic, who made a five-month trip through the Eastern Arctic and Greenland last year, delivered a sermon Feb. 21 at Grace Episcopal Church, Broadway and Tenth Street.

He declared that love of mankind was the dominating factor in Christianity and that it was this spirit of love that had moved St. Paul to give up the life of a scholar and teacher to become a traveling missionary among strange people. This same spirit of love, he said, had sent forth missionaries into the frozen North.

The Bishop emphasized the importance of training Eskimos as teachers among their own people. He paid tribute to the missionaries who were prepared to spend their lives in the isolation of the North and to travel thousands of miles each year by sledge and dog team and by motor boat in Summer to carry on their work.

This, however, was only the first step, he said. The second, and equally important, he continued, was to train native leaders so that they might serve as mentors to their own people. He urged increased effort by the church in this work.

Known as "the Flying Bishop" Dr. Fleming presides over a vast diocese extending across the top of North America, from Labrador on the East to the Yukon on the

They learned there that Blanchette and a flier named Dalzell, locally famed as "the flying trapper" had checked the same route by airplane while Lieutenant Hammond's party was on the trail. The route had been tentatively selected as the best available for the pipeline. Lieutenant Hammond's report confirmed the choice, with proof that the route was practicable on foot.

The expedition was Lieutenant Hammond's second major piece of exploration in the Arctic.

Some months earlier, when the Alaska Highway engineers were seeking a secondary route through a section in Alaska near the Nebesno River, he was chosen to make a trip, single-handed, in a plywood assault boat.

His boat overturned in some rapids, and when Lieutenant Hammond did not reach his destination airplane searching parties were sent and found some of his equipment scattered along the river bank.

Other searching parties, on foot, searched for him for a week. But by that time he had made his way through the mountains to safety.



Right Rev. A. L. Fleming

West. His cathedral is in Aklavik, near the mouth of the Mackenzie River, 120 miles North of the Arctic Circle.

Royal Mounted Police Ship Crew Decorated

OTTAWA, Jan. 5 (CP)—Stalwart members of a Royal Canadian Mounted Police schooner crew have been granted the proud right to wear on their scarlet tunics a small white ribbon, in recognition of their contribution to knowledge of the lonely Arctic.

Sergeant H. A. Larsen and seven crew men were awarded the Polar Medal in the New Year's honors list. In October, seven of them completed a 27-month voyage at Sydney, N. S., after completing the Northwest passage from the Pacific to the Atlantic in the Police Auxiliary Schooner St. Roch.

The medal is awarded to persons who have made a contribution to Arctic or Antarctic exploration, and R. C. M. P. officials recalled it was given to members of the Shackleton Expedition in the Antarctic.

Arctic Future Full of Hope and Promise

TORONTO, Jan. 19—The future of Arctic Canada, both commercially and spiritually, is full of hope and promise, said the Right Rev. A. L. Fleming, Bishop of the Arctic, in a recent address here before the Lyceum and Women's Art Association of Canada.

He predicted that the Arctic way would be the quickest and safest route to Great Britain, Europe, Russia and Asia, and the most popular after the war, Bishop Fleming was enthusiastic about

REINDEER IN MEAT PICTURE

Writer in 'Science' Points to
Herds in Alaska and Canada

WASHINGTON, April 23 (U.P.)—Because fighting men and war workers must have their proteins science called attention today to millions of juicy reindeer steaks on the hoof in Alaska and Canada.

Writing in "Science," a weekly, Professor William H. Hobbs of the University of Michigan said that there were 50,000 to 100,00 domesticated caribou (reindeer) in Alaska and millions of wild ones in Alaska and Canada.

Reindeer meat, he added, "surpasses in its palatable qualities the best beef or the best venison."

He declared that too many Americans were too paunchy and that a meat shortage probably would be good for them, but that refrigerated reindeer meat could be shipped from Alaska to our bases in the Southwest Pacific and to our own Pacific ports as supplies for war workers.

Injured Trapper Stands 20 Hours in 60-Below Cold

DAWSON, Yukon Territory, Feb. 12 (Canadian Press).—A grizzled 71-year-old trapper and hunter, his hands and feet frozen and unable to travel farther because of a broken snowshoe, stopped on the trail, banked snow about his knees and stood more than 20 hours in 60-below-zero weather until help arrived, his rescuers said yesterday.

George Ortell was brought to a hospital courageously facing the prospect of amputation of hands and feet but determined to resume his usual life again.

"Save what you can, Doc," he told Dr. Allan Duncan. "I've got to hobble around somehow. Figure on getting me a bunch of mighty fine beaver over on the McQuesten later this year."

U. S., Canada Agree on Seals

WASHINGTON, June 14 (AP)—Protection of Pacific fur-seal herds and a division of the catch which formerly went to Japan has been agreed upon by the United States and Canada, an informed but unquotable source disclosed today. The agreement, reached late in 1942, has been referred to the Senate Foreign Relations Committee in the form of a bill by Senator Tom Connally, Democrat, of Texas.

the development of air fields by the United States Army, declaring that from it would come a great opening up of the Arctic.

The Arctic is short of many things, food supplies, particularly canned goods, radio supplies, spare parts for engines and commercial planes, he reported, but the Eskimo exhibits considerable ingenuity in substitutes.

Bishop Fleming himself has worked among the Eskimos for 34 years, and found them highly intelligent persons, he said.

U.S. AND CANADA ACT TO OPEN UP BIG AREA

The Two Nations Will Improve
Million Sq. Miles of Alaska,
Yukon, British Columbia

By The Associated Press.

WASHINGTON, Jan. 24—The joint economic committees of the United States and Canada announced today a plan to extend their wartime collaboration to peacetime development of 1,000,000 square miles of Alaska, Northern British Columbia and Yukon Territory and improvement of living conditions of the area's 100,000 residents.

The immediate objective of a study to be sponsored by the committees, they said in a joint statement, will be to gather information on the region as a preliminary to proposals for developing the resources, improving living standards, increasing the population and other undertakings in the area.

Dr. Alvin H. Hansen is the chairman of the United States committee and Dr. W. A. Mackintosh heads the Canadian committee. The work will have the cooperation of the two governments, the committees said.

By The Canadian Press.

OTTAWA, Jan. 24—An international planning project aimed at extending the wartime collaboration between Canada and the United States in peacetime development of a vast area of Northern British Columbia, the Yukon Territory and Alaska was announced today by a Canada-United States economic committee.

The committee's study is believed to be the first of such magnitude approached on an international basis, said a statement issued here today.

"The immediate object of the study is to gather basic information on the region and develop for the consideration of the joint economic committee's proposals for Canadian-United States economic cooperation in the development of resources, the improvement of standards of living, settlement and other undertakings," the statement said.

The study is to be carried out by cooperating officials of the two governments with "the active assistance" of British Columbia officials. Charles Casmell, Deputy Minister of Mines and Resources for Canada, and James C. Rettie of the Portland (Ore.) office of the United States National Resource Planning Board have been appointed to organize and direct the study.

The North Pacific region has seen vast expansion of transporta-

tion facilities and additional population as the result of war activity, and it is believed this will create new possibilities for peacetime development.

Expansion Is Called Sure

The chain of airfields and the new highway from Edmonton to Alaska, as well as a proposed railway, are certain to cause marked expansion in that part of the continent comprised of Alaska, the Alaska Panhandle, the Yukon Territory, parts of British Columbia north of the Skeena River and in adjacent parts of the northwest territories and probably Northern Alberta, officials said.

It was learned unofficially that persons familiar with the immense resources in those areas feel they could be developed best if there were close cooperation between Canada and United States territories. They argue that for economic purposes, and possibly in the matter of administration, the development should go on as a joint undertaking of the two countries, without regard to national boundary lines.

The Alaska-Yukon country may be an important part of the post-war air route from America to Asia. It is certain, informed persons said, that the war development of communications now in progress will grow extensively after peace comes and a joint authority of the two countries could best handle this development.

ALEUTIANS ARE STEPS ON ROUTE TO TOKYO

Attu Is Only About 1,600 Miles
From Japan's Hokkaido

WASHINGTON (Science Service)—The long hours of daylight and twilight which come during the Summer months in the north-land and now illuminate the Aleutian Islands are constantly increasing. This means longer days for daylight bombing of the Japanese bases in the Aleutians.

Dutch Harbor is at about the same latitude as Edmonton, Canada, 300 miles north of the United States-Canadian line and the Glacier National Park in Montana. It has a far different climate, however, because the warm Pacific current sweeps the Aleutians and causes more uniform and higher temperatures, together with much rainfall and fog.

The Aleutians stretch westerly 1,200 miles from the end of the Alaska Peninsula nearly to Siberia. Attu, the western American island, is less than 800 miles from the southern tip of the Kamchatka Peninsula. This in turn is only about 800 miles from the north coast of Hokkaido, the north is-

land of Japan proper, and about 1,400 miles from Tokyo.

The Aleutian Islands have been described as a string of barren, rocky, treeless islands, stretching like stepping stones from Asia to North America. The ancestors of the American Indians and Eskimos probably followed these stepping stones in their hazardous migrations from Eastern Asia to Alaska, and then to the south and east. It would seem that the Japanese thought they could use the same stepping stones to reach the American Continent. But now they will be used in reverse.

The importance of the Aleutians to the American armed forces is strategic. First they must be cleared of the enemy. Then they can be used for bases between America and Asia. They are close to or on the shortest routes across the Pacific.

Safe harbors and airfields along the Aleutians are of the utmost importance to the Allied Nations when the all-out attack on the Japanese homeland begins. They are important also in delivering aircraft cargoes of food and war equipment to Russia.

Most of the Aleutian Islands are uninhabited. They can be used the year round for military bases. They seldom have below zero temperature, but they are always chilly, damp and foggy. The fogs constitute the greatest difficulty in making full use of them.

Mackenzie River Agriculture The Christian Science Monitor By Kate Archibald

Potatoes that can be grown on the delta of the Mackenzie River, cauliflower produced near Nome, and rutabagas inside the Arctic Circle might sound like tall tales except that they were part of the considered discussion of a group of men who know the North; assembled recently to discuss its resources.

The possibility of potatoes near where the Mackenzie empties into the Arctic Ocean was advanced by Dr. Charles Camsell, geologist for the Canadian Government. As a boy Dr. Camsell lived at Fort Laird, when it took him three months to get down to Winnipeg to school. Today, men fly out in a matter of hours. It was his father who discovered that, although the ground is perpetually frozen four inches below the surface, cultivation of the soil thaws it down to 16 inches so that potatoes may grow in it.

Another phenomenon brought out at this meeting is that crops are less liable to frost in the extreme north, where the sun never sets in mid-summer, than they are farther south, as at Fort George, where the few hours of night are enough to cool the earth and make frost possible.

Root Crops Among Best

Far from being undue and fanciful boosters for agriculture in the North, these men were restrained by what they knew to be facts. One said that practically every fruit and vegetable had been grown in Alaska as a stunt and exhibition but that the reliable crops were the hardier root crops and such vegetables as would develop quickly in the short season of long growing hours of sunshine.

But every man present was definite in his conviction that agriculture must accompany any development of minerals, oil, airways, industry, and tourist trade if the country is to provide stable community life rather than one of boom exploitation.

One speaker described pioneering in the North as different from the traditional covered wagon settlement, where the first move was to clear land for crops. In the North the spearhead of

settlement has been gold and now, in the new territory, oil. More remunerative occupations have kept men from developing agriculture.

But today the gold mines are closed and men are turning to "pay dirt" in farming. The boats that formerly brought vegetables have ceased to bring only enough for a limited supply and today Alaskans are growing their own. All over Alaska are Victory Gardens. Formerly there were no markets for surplus supplies; today the armed service could use six or ten times what is produced.

Winter Feeding Difficult

Alaskans are learning now what will and what will not grow and how to care for gardens under northern conditions and the University of Alaska has extension stations to teach people how to meet problems peculiar to the North. More livestock is a need and presents the greatest present problem, which is winter feeding. Hay and grain will grow but the difficulty is in curing it for winter use, where damp and cold make usual silage treatment unsuccessful. But experiments are being made and Alaska will learn.

Matanuska is an inspiration, and now that the broad Northland is being tied together by transportation methods of farming in the Peace River Valley of Canada will be better known. A visitor, recently returned from Matanuska, told of one farmer who last year made a net income of \$3,500. "It depends on the man," he explained, and another speaker said, "Any failure of agriculture in Alaska depends less upon limitations of climate and soil than it does upon the man who attempts it." That was the trouble with Matanuska, at first, when, it was explained, the colonists were largely relievers rather than those who were essentially farmers eager to learn new methods.

The big trucks that haul rich dairy products in from Matanuska to the military and civilian population at Anchorage could find markets for six times what they are able to supply. And there still are good parcels of land left in the Matanuska and on the Kenai Peninsula.

Plane Beacon Built in Battle With Elements

Radio Crew Bests Blizzards, Mountains, 30-Below Cold and a 28-Day Deadline

By John H. Durston

New York Herald Tribune

Pan American Airways, whose pioneering exploits in the jungles of Brazil and Africa have made aviation history, came forward April 3 with the story of a war-time task in Alaska that reads like the pages of Jack London.

The story begins with a radio message to Wayne Downie, communications construction engineer of the system's Alaska division: "Proceed installation glacier base station soonest. Must be operative within twenty-eight days. Anticipate difficulties but need urgent. Know you can do it."

One of the vital military air lines in Alaska crosses the divide at a place where three river valleys come together, bringing down with them three kinds of weather. It is a wild and rocky terrain with glaciers on two sides and a narrow pass on the other. The only flat area in the vicinity is one tiny island among the peaks.

To fly through the pass and across the divide was pretty much routine for Pan American's sourdough Alaska pilots, but to keep a stream of bombers and fighters moving across with pilots unfamiliar with Alaska operations was another. It was imperative to establish a radio station in that remote section of the divide, and Wayne Downie was allowed twenty-eight days to do it.

Land 70 Miles From Site

Mr. Downie and his party went in by plane to a station seventy miles from the site for the new base. In addition to getting themselves into the almost inaccessible spot, they had to transport two transmitters and receivers, a wind-charger, windmill, steel for a forty-five-foot tower and food supplies.

With H. M. Burcham, radio mechanic, and two boatmen, Mr. Downie started off in a launch for a forty-mile trip upriver and almost immediately ran into a sleet storm. The heaviest pieces of equipment were aboard a towed skiff, which promptly foundered in the waves. They managed, however, to get the equipment ashore without losing even a bolt.

Before the Arctic night fell, the party had encountered another blizzard, in which chunks of ice were washed over the gunwales of the boat. Nearly stiff from cold, they finally succeeded in inching up the creek to a landing where dog teams were to meet them.

Dig Supplies Out of Snow

"Next day," Mr. Downie related, "we snowshoed back to the creek to wrestle up the freight. Of

Canada at War Nurtures Vision Of Peace-Time Progress Ahead

New Military Highway and Plane's Advance Conjure Up Picture of Vast Development in Northern Area, Transforming Dominion's Outlook

By Ben Robertson

VANCOUVER, B. C., Jan. 30.—The whole Dominion of Canada is buried under a heavy snowfall, but clear across this northern country there is a soaring new idea that seems to penetrate beyond the limits of anything so temporary as the weather. In one city after another over this nation there are thousands of Canadian men and women to whom the world suddenly has taken on a new proportion and a new shape. There is a feeling in Canada that the new northern highway and the airplane soon will turn Canada into a new universe. Canada no longer will lie on the edge of the world. It will become the center of trade and travel bound over the rim of the globe.

All of this new feeling has created an air of excitement up here, and there is an attitude among Canadians that despite everything the world is still new and nothing anywhere is final or finished. People are talking of a new Fairbanks and of a new Edmonton and of far northern valleys being settled and of planes flying, once peace comes, to the North Pole and Russia. It is interesting and romantic to listen to Canadians and Americans in the North talking of a new era for the Yukon and Alaska. It sounds almost like the coming of a new bonanza.

At the snow-covered airdrome in Toronto there was an engineer from New York on his way to throw a dam across a river a thousand miles from civilization. There was a man from a com-

pany in Kansas City, Mo., who talked about a contract for five new townsites. If he got that contract it would involve \$200,000,000. There was a United States Army sergeant homeward bound, on leave from the Far North, who told about Georgians and Texans making themselves at home in temperatures 50 below zero. At one time their only communication with the world was by airplane and for six months they did not see a civilian.

The sergeant told about Negro soldiers flying in from Alabama. They started to work at the far end of the Alaskan highway and said that every lick of work they did would bring them that much closer to Alabama.

The sergeant told about American soldiers panning gold through the summer in their spare time. They had struck a paying streak.

Cecil Scott, a Vancouver writer, declares there are a million square miles of northland to be developed—an area twice the size of Scandinavia, with all the resources of Scandinavia. Thirteen million people live in Scandinavia, while in Alaska and in Canada's northwest there are only 176,000 trappers, fishermen, gold and silver miners and townspeople. There is gold and tungsten and silver up there, and now there is the highway.

course, the over-night wind had drifted six feet of snow over everything, but we managed to locate the whole works, with the exception of two rolls of wire. We dug the stuff out of the snow, piled it up into sled loads and got one of them to the lodge before night.

"Next day we found the two coils of wire after only a half hour of digging and ran another sled load of freight to the lodge. We could make only one trip a day. The snow was five feet deep, fresh over the crust, and you'd sink right out of sight. The third day one team and sled brought back all the odds and ends while Burch and I organized the freight into two sled loads, and got our trail gear in shape for the mush ahead. We were beginning to worry a bit over the time."

Ten of the allotted twenty-eight days had been consumed by the preparations for the trip and the actual journey. They had

twelve miles to go to the glacier base and by 3 o'clock in the afternoon they had accomplished ten of them. They were traveling up the ice of the river with two miles to go. Suddenly the river cracked open in front of them, and the first breezes of a williwaw began to come down the canyon.

Dogs Prevent Disaster

Knowing that the williwaw would freeze them to death or blow them entirely out of the canyon, they abandoned their freight on a river bar and returned to the lodge as fast as they could go. Twice they would have fallen into fresh openings in the river ice if their dogs had not stopped them on the brink.

The next day they decided that their schedule would allow no more strategic retreats and they fought their way to a cliff along which they hoped to be able to crawl a half-mile to the glacier ice.

"We were frozen stiff," Mr.

Alaskan Front Is Healthiest of All War Zones

Lacks Body Lice, Tetanus, Malaria, Bedbugs and Sexual Disease Carriers

WITH THE UNITED STATES ARMY IN THE ALEUTIANS, May 5 (Delayed) (P).—An Army doctor who has seen service in China and the Philippines observed today that the Alaskan war zone, despite its drab weather, "is perhaps the healthiest front in the world."

The doctor, Colonel Dwight M. Young, of Orlando, Fla., explained that the sick rate among the troops is less than 1 per cent.

His assistant, Captain Edward K. Mills, of Dallas, Tex., added that the sickness rate in the United States, excluding epidemics, is double Alaska's.

Medical officers cite a number of reasons why this land of hard winter blows, drenching rains and all-pervading fogs is healthful.

The most important is that there are no body lice, hence no typhus. There are no sources for the spreading of sexual diseases in the Aleutians. It is the world's most womanless war zone. At bases nearer inhabited districts, however, some cases are reported, but they are few.

Tetanus is almost unknown in Alaska. The soil has not been contaminated with the organism as yet. In Europe or Asia, medical men say, any cut invites lockjaw.

There are no bedbugs. There is no malaria. Soldiers transferred to Alaska from the malarial swamps of the Solomons report themselves fit and healthy in this sharp climate. However, there are malaria-carrying mosquitoes here, according to Major Oscar P. Moffitt Jr., of High Point, N. C.

Downie said, "we were so hungry we were chewing branches, and the huskies were so damned mad and worn out they'd lunge at us every time we came within range. I don't rightly know how long it took to make that half mile."

They dropped a box of tools down the cliff and into the river and had to fish it out. Five times the sleds tipped over and slid down the cliff. The radio operator crashed through ice into three feet of water. It was pitch dark and 30 degrees below zero, but they reached the station site.

In four days they set up the radio tower and installed the apparatus, despite a day lost when Mr. Downie was felled by a sudden attack of appendicitis. Finally, two minutes before midnight on the twenty-fifth day of their assignment, the radio operator cleared the channel to Seattle and sent this message: "Pan American station (censored) Alaska. Ready and standing by for orders."

SERVES ALEUTIANS IN ANTIQUATED PLANE

**Bush Flier, Hired by Army,
Wins Respect of Airmen**

HEADQUARTERS ALASKA DEFENSE COMMAND (UP)—Even the boldest Army pilots, toughened by many a combat mission over Kiska garrison, cross their fingers and utter profanely respectful comments when they see Bob Reeve's airplane on an Aleutian landing strip.

For Reeve, the only civilian bush pilot employed by the Army in the Aleutian combat zone, is a veritable white-haired wonder—and he files with equipment an Army-trained pilot would not be caught dead in.

"Why, hell," a veteran combat pilot shuddered recently when Reeve's battered old Fairchild slipped in through the fog to a three-point landing on Uniak Field, "I would just as soon kite around through these volcanoes on an ironing board."

But when anybody mentions to Reeve that he may be taking extraordinary chances flying his ancient single-motored plane in what all pilots agree are the world's worst flying conditions, he merely looks surprised and allows in a mild voice that he likes Aleutian flying. He admits that the fog, the williwaws and the freezing rains make things a bit difficult at times, but he adds that this is all to the good because, he says, "it keeps a fellow sharp."

Reeve has been flying the Alaskan skyways as long as there have been airplanes in the north. He was the first pilot to make a practice of landing on glaciers and high summer snow slopes in the mountains of the interior. As a result of his pioneering in this connection, a number of valuable gold mines in formerly inaccessible areas became workable.

He has flown freight, mail and passengers to every remote corner of the Territory and never has had a serious crack-up. When the Army, recognizing his ability, hired him to transport Army freight for the duration, he received a choice of routes. Reeve said he guessed the Aleutian run would suit him all right.

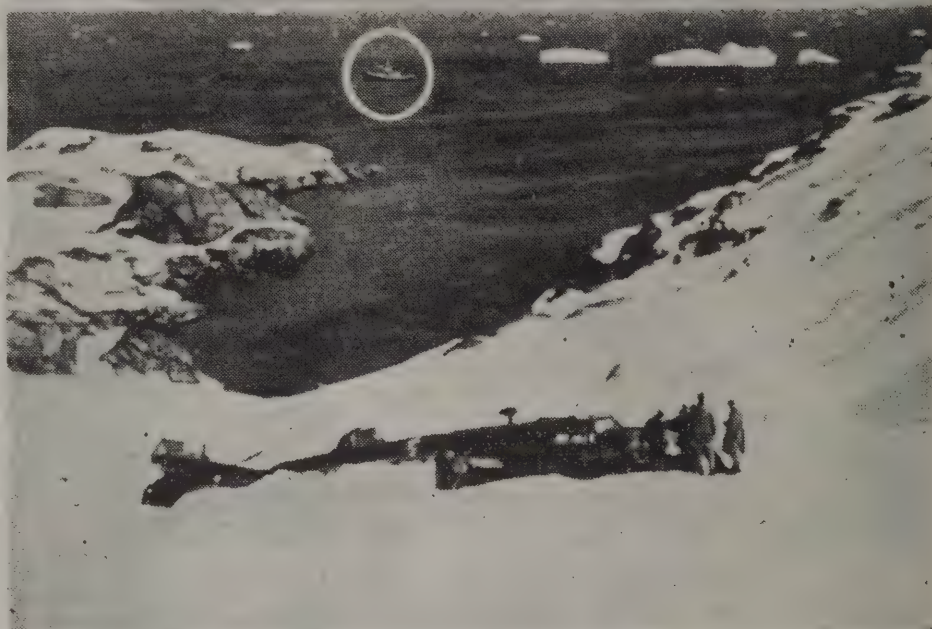
Eskimos Seek Bonds for Pelts

JUNEAU, Alaska, May 5 (P).—Natives of the isolated Indian village of Kiknuk want to do their bit toward helping in the war effort. The Office of Indian Affairs receive a bundle of mink and weasel pelts, with instructions they should be forwarded to the government for exchange for war bonds. General Superintendent Claude M. Hirst sold the pelts in Juneau for \$117.60 and sent in cash instead of furs.

Too Intricate for the OPA

WASHINGTON, Feb. 2 (P).—Asserting they were too difficult to enforce, Price Administrator Prentiss M. Brown Feb. 1 abolished price regulations on Indian and Eskimo handicraft articles.

THE COAST GUARD GOES TO THE AID OF MAROONED AIRMEN



The crew of a B-25 bomber waiting at the spot in Greenland where they spent four days when forced to make a crash landing because of lack of fuel and poor visibility. The cutter is shown (circle) as it approached to take them off.

(U. S. Army Air Forces)

GREENLANDERS SEND MUSK-OX TO PRESIDENT

**Isolated Two Years, They Thank
Him for Coast Guard Relief**

BOSTON, Feb. 24 (P).—A haunch of musk-ox for the White House and a letter of thanks to President Roosevelt were the means employed by 200 grateful Greenlanders to express their appreciation for relief brought by the United States Coast Guard to an Arctic community.

Coast Guard officers in Boston revealed today that the musk-ox meat, described as more delectable than beef, had been transported by cutter and plane to Washington, after a cutter had crashed through heavy icefields with supplies and fuel to the long-isolated community.

Officers in a stirring ten-month combat patrol told how the voyage carried them past towering icebergs that dwarfed their ship and through icefields supposedly impassable to shipping, to bring the first fuel and supplies landed at the village in two years.

Lieut. Comdr. Francis C. Pollard of Fairhaven, Mass., commanded the cutter. Thirty days were needed to run 150 miles through the heaviest of the ice mass, said Lieutenant Norman S. Von Rosenberg of Hamilton, Mass. Lieutenant Carlton Skinner of Washington, navigating officer, added that

Six on Bomber Survive Greenland Crash; Missed Icebergs, Mountain, Landed on Reef

WASHINGTON, June 28 (UP).—Good fortune and good flying saved the lives of six members of a B-25 Mitchell bomber crew who crash-landed on the Greenland coast after encountering seemingly insurmountable hazards, a War Department report revealed tonight.

The bomber, piloted by First Lieut. Julian J. Blais of Fitchburg, Mass., was returning to its base from a patrol mission when the weather closed in. An instrument approach would have been suicidal over the rugged mountainous coast. The gasoline was running low. There was no other airfield. Snow and ice static precluded radio navigation. Ice was weighting the plane down.

Hoping for a break, Lieutenant Blais took his bomber to 14,500 feet to clear the mountains and headed for the field. But there was no hole in the clouds. He headed out to sea again.

He flew down to barely ten feet over the water. Visibility was zero. The ceiling blended with the sea. He and his co-pilot, Lieut. L. I. Moor of Grangeville, Ida., had

to make several sharp pull-ups to avoid icebergs.

Life expectancy in the sea off Greenland is about twenty minutes, so the fliers headed back toward the coast.

Blais planned to follow the coastline and land at the edge of the water when opportunity came. Suddenly a mountain loomed ahead. They had been flying up a fjord. Blais put the plane in a tight vertical bank, dangerously near stalling speed. The plane responded, barely ten feet over the water. They missed the mountain by inches.

With a few minutes' fuel supply left, Blais saw a small snow-covered reef through the haze, with about 300 feet of landing space. He brought the ship in just above stalling speed, tail down. Ahead loomed a large boulder. It ripped the right engine from its nacelle. The fuselage broke aft the midsection, and the plane came to rest.

The crew suffered only cuts and bruises.

Tech. Sgt. James R. Brewster of Maskell, Neb., made contact with the base by radio, while the others got out their sleeping bags. Before they got into their bags on the frozen ground a weak radio message said help was on the way.

On the third day a rescue plane dropped food and bed rolls. Afterward a Coast Guard ship arrived and took the men to safety.

the crew later learned that Hendreyk Hoegh, Mayor of the settlement, climbed daily to the top of the cliffs that ringed the village to search the expanse of flocs for a glimpse of the rescue ship.

7 AIRMEN RESCUED FROM ARCTIC TRAP

Balchen, in Three Flights to Greenland Ice Cap, Helps Save Crew of Bomber

By The Associated Press.

WASHINGTON, May 3—The grim story of the rescue of seven airmen from the Greenland ice cap after five months of persistent attempts in which five men died was told today by the War Department.

After the failure of various attempts to bring the men out, including use of motor sleds, Colonel Bernt Balchen, noted flier and Arctic explorer and hero of two previous rescues on the ice cap, succeeded in landing a Navy flying boat and taking off on three different occasions—not on water, but on snow.

Three of the rescued airmen, accompanied by General H. H. Arnold, Air Forces commander, visited President Roosevelt today—Captain Armand L. Monteverde of Anaheim, Calif.; Lieutenant Harry E. Spencer of Dallas, Texas, and Staff Sergeant Don T. Tetley of Fort Sam Houston Texas.

Captain Monteverde was pilot and Lieutenant Spencer co-pilot of a Flying Fortress which was being ferried to Great Britain but was diverted last Nov. 9 to search for another plane that was reported overdue.

The other plane never was found and while the second was engaged in the unsuccessful search, it crashed near the West Coast of Greenland.

The plane broke in two, and the radio was wrecked. Sergeant Paul J. Spina of Frankford, N. Y., was the only one seriously injured. He was thrown clear of the plane, broke one arm above the wrist, and lost both gloves, so that his hands froze before he could be carried back into the plane. Others of the crew were shaken up.

Spend 10 Days in Wrecked Plane

The crew rigged quarters in the tail of the broken fuselage, but there were only limited rations aboard and no heat or lights. High winds and driving snow kept the men inside the crumpled Fortress for ten days. Their situation was made more perilous when a fissure opened in the ice beneath the tail section, but they fastened their living quarters to the forward part of the plane with ropes.

Despite the intense cold, Corporal Loren H. Howarth of La Crosse, Wis., got the radio repaired, and the stranded men established communication with would-be rescuers, who now included the Army, the Navy and the Coast Guard.

On the fifteenth day Colonel Balchen flew over and dropped supplies. At about the same time Sergeant Tetley and Lieutenant Max H. Demorest of Flint, Mich., set out with two motor sleds from a small weather station not many

BALCHEN GETS MEDAL FOR RESCUE OF FLIERS

He and 7 Other Army Men Aided Navy in Greenland Exploit

WASHINGTON, Feb. 16 (AP)—For heroism in rescuing fliers forced down in Greenland, Lieut. Col. Bernt Balchen of New York City, Arctic explorer, and seven other officers and enlisted men of the Army have received the award of the Soldier's Medal.

The War Department said today that the medal was for sharing in a rescue in June by Navy fliers of the crew of a Flying Fortress forced down in an isolated section of Greenland. The Navy fliers received the Distinguished Flying Cross for their feat.

Two weeks later Lieut. Col. Balchen, with one of the same Navy pilots, Lieutenant Aram Y. Parunak, participated in the rescue of Colonel Robert W. C. Wimsatt and an Air Corps sergeant, and for this rescue won an oak leaf cluster, equivalent to a second Soldier's Medal.

The medal also was awarded for heroism in Greenland to Sergeant Neils C. Jensen of 446 East 185th Street, the Bronx, N. Y., and Corporal Donald Kent of Ausable Forks, N. Y.

Bomber Crew Battles Greenland Winter To Feed Comrades Stranded on Ice Cap

WASHINGTON, June 8 (AP)—The story of how Capt. Kenneth H. Turner of the Air Transport Command and his B-17 crew kept the stranded crew of another B-17 alive by dropping food and supplies to them in Greenland for four months has been released by the War Department.

Captain Turner, formerly a commercial pilot at Cheyenne, Wyo., was instructed on Dec. 6 to fly supplies to the crew of Capt. Armand L. Monteverde's B-17 which had crashed on a Greenland icecap in winter weather while looking for another plane.

Captain Turner and his crew

miles from the crash. They finally reached the scene on foot, went back for their sleds, and then Lieutenant Demorest disappeared with his sled into a crevasse less than 100 yards from the plane. All rescue attempts failed.

Meanwhile Lieutenant John A. Pritchard Jr. of Burbank, Calif. a Coast Guard flier, landed a Grumman plane near the wreck and then flew back to the cutter Northland, taking with his Sergeant Alexander F. Tucciarone of the Bronx, N. Y., and Staff Sergeant Lloyd Puryear of Lebanon, Ky. He returned to the wreck during the attempt to rescue Lieutenant Demorest, but was ordered to take off immediately because fog was closing in. His plane crashed in the take-off, killing all aboard—

Three Ferry Pilots Saved After 14 Days on Glacier

By The United Press.

LONDON, Feb. 15—Suffering from frozen hands, three men ferrying a bomber from Canada to Great Britain have been reached by an American Coast Guard cutter after spending fourteen days on an Arctic glacier, where they were forced down.

Pilot Officer David Goodlet, 23 years old, of Simcoe, Ont.; Pilot Officer Alfred Nash, 27, of Winnipeg, and the navigator, Sergeant Arthur Weaver, 27, of Toronto, said that they had sighted the cutter on the twelfth day but had been unable to attract its attention, though sending up their last flare.

The next day they sighted a plane and attempted to attract it by setting fire to one of their greatcoats, but without results. Later they burned their flying jackets. This enabled the cutter to spot them.

Eskimos Eat Frozen Birds

Certain Eskimo tribes catch wild birds in the Springtime, place the carcasses in canvas of perpetual ice, and eat them in the Winter when fresh meat is scarce, it is stated in a report to the American Chemical Society on cold storage of food.

SAVE TWO ON ICE CAP BUT DIE WITH THIRD

Coast Guard Fliers' Heroic Feat Described by Navy

WASHINGTON, Jan. 19 (AP)—A veteran Coast Guard aviator rescued two stranded, wounded survivors of a Flying Fortress crash from the ice cap of Greenland and then, it is assumed, lost his own life in trying to save a third man. The Navy Department told the story today.

The aviator was Lieutenant John A. Pritchard Jr., 29, of Burbank, Calif. He is listed as missing along with his radio man, Benjamin A. Bottoms, 29, of Salem, Mass., and an unidentified Army aviator.

When Commander Francis C. Pollard, of Balboa Island, Calif., received word that radio contact had been established with the crew of the Flying Fortress, lost two weeks previously, Lieutenant Pritchard confidently asserted that he would be able to land on the ice, pick up survivors and take off again. He and Bottoms took off, sighted the wreck of the bomber and Bottoms sent a message that they were ready to land.

"Don't try it," the men on the ground replied. "You'll never make it."

The fliers made it, however, and found the survivors weakened by lack of food and suffering terribly from cold. One of the three had a broken arm, two had gangrene.

The rescuer could take only two passengers and it was decided they would be Staff Sergeant Lloyd W. Puryear of Camelsville, Ky., and Private Alexander L. Tucciarone of 2572 Bronxwood Avenue, the Bronx, N. Y.

The next day Lieutenant Pritchard and Bottoms attempted to save the third survivor. They succeeded in landing and picking up the unidentified Army airman but crashed returning to the cutter. Fliers found the wreckage of their plane—but no sign of life.

dropped by the Air Transport Command when the weather permitted.

A ski-plane borrowed from the Maritime Central Airways of Canada attempted to reach them, but was forced down in a fjord when its fuel ran out in bad weather. The pilot and co-pilot made their way back to the rescue base.

In February Colonel Balchen succeeded in landing the Navy flying boat beside the sled camp and rescuing all the men there, including O'Hara, who lost both feet. But bad weather prevented a return trip by Colonel Balchen until early in April, when he made a second trip, carrying a dog team and several men experienced in Arctic work. These succeeded in bringing Captain Monteverde and the others from the plane to the sled camp and on April 6 Balchen landed his PBV in the snow a third time and flew out with all survivors, including Technical Sergeant Alfred C. Best of Waco, Texas.

Pritchard, Howarth and Radioman Benjamin A. Bottoms of the Coast Guard.

The feet of Lieutenant William F. O'Hara of Scranton, Pa., had frozen and were gangrenous, so Captain Monteverde put him on a sled and sent him off—Sergeant Tetley driving the sled and accompanied by Lieutenant Spencer and Private Clarence Wedel of Canton, Kan.

A mile and a half from the wreck, Private Wedel dropped into a bottomless crevasse and was lost. Four miles farther on, the sled broke down, and the survivors were stranded in two camps. Foul weather and the all but impassable terrain frustrated all attempts to reach them, and they were kept alive by supplies flown in and

F. A. WORSLEY DIES; POLAR EXPLORER

Ship Captain for Shackleton
on Two Expeditions Taken
to Antarctica

LONDON, Feb. 1.—Commander Frank Arthur Worsley of the Royal Naval Reserve, explorer of the Polar seas, who is believed to have been the last survivor of the Shackleton Antarctic expedition of 1914-16, died today in Claygate, Surrey, at the age of 70. He was master of Sir Ernest's ship *Endurance*, on that expedition, and master and hydrographer of Sir Ernest's *Quest* in the expedition of 1921, on which the leader died. He was also joint leader of the British Arctic expedition of 1925.

As a variation from hazardous Polar exploration Commander Worsley went in 1935 to Cocos Island in the Pacific Ocean to search for pirates' hoards reputed to be worth several millions of pounds sterling. Costa Rica authorities halted the expedition and Commander Worsley admitted on his return to England that he failed to find a doubloon or a piece of eight.

A Perilous Voyage

Commander Worsley had a distinguished career as an explorer and naval officer. Often close to death, he endured great hardships in the Antarctic as an associate of Sir Ernest Shackleton. In the first World War he was also engaged in very hazardous pursuits.

Born at Akaroa, New Zealand, he was the son of Henry Theophilus Worsley. The expedition on which he commanded the *Endurance* was Sir Ernest's second. On the first which Shackleton led, he came within ninety-seven miles of the South Pole. The *Endurance* entered the ice pack in the Weddell Sea late in 1914, worked its way in adverse climatic conditions southward, led its passengers to the discovery of the Caird coast between Coats Land and Luitpold Land in 1915 and later drifted northward. In October, 1915, the *Endurance* was crushed under ice pressure and abandoned.

The twenty-eight men of the expedition camped on an ice floe until it broke up in April, 1916, having drifted northward. The party took to three small boats, and landed six days later, after great hardships, on Elephant Island. Then Sir Ernest, Commander Worsley and five others made a 750-mile voyage to South Georgia island in an open boat.

Commander Worsley wrote of this expedition in his book, "*Endurance*," published in 1931. A reviewer in THE NEW YORK TIMES, speaking of Sir Ernest's admiration for Commander Worsley, said: "What his chief thought of his (Worsley's) courage and fidelity may be judged from the fact that Worsley was in the open boat that made the perilous voyage from

Gillam, Hero of 100 Flights In Arctic, Dies on Mercy Trip

(By The Associated Press)

KETCHIKAN, Alaska, Feb. 8.—Harold Gillam, hero of a hundred adventures along the Arctic airways, died in one of the most dramatic of them all—braving the interbound wilderness to bring rescue to the passengers of a plane he crash landed in a January blizzard.

The frozen body of the 40-year-old pilot was recovered Saturday by Coast Guardsmen from the beach of Boca de Quadra, an inlet south of Ketchikan. The spot was not far from the mountain peak against which Gillam's plane struck January 5 during a routine flight north from Seattle.

Mr. Gillam apparently died from starvation, exposure and shock. The Coast Guard theorized that, weakened, he must have fallen into the water, lost his scant supply of matches and thereafter had been helpless against the cold.

Alaskan Flyer for 21 Years.

In Alaska for 21 years, Mr. Gillam had participated in aviation in the territory from its earliest stages.

In 1920-30 Mr. Gillam participated in the winter-long search for Carl Ben Eielson, another Arctic flyer, who crashed off the coast of Siberia while flying furs from the ice-bound schooner *Nanuk*.

Flying with the aurora borealis for light, Mr. Gillam found the wreck far north of the Arctic Circle. Later he helped bring out the bodies.

Once before, in 1938, Mr. Gillam was thought lost. He ran out of fuel south of Point Barrow, but found a native and sent him for gasoline with a dog team. Then Mr. Gillam flew on to Barrow.

Had Five Passengers.

Five passengers were with Mr. Gillam on his last flight. Miss Susan Batzer, 23, Camas, Wash., died two days after the crash from loss of blood. Three days later Mr. Gillam, with a handful of raisins and a candy bar, started for help.

When he failed to return Joseph Tippets of Anchorage and Percy Cutting of Hayward, Calif., two others aboard the plane, cut through deep snow and reached Smeaton Bay, where they were found early last week.

Acting on their directions, rescuers reached the wrecked plane and found the other two passengers. Dewey Metzendorf of Anchorage and Robert Gebo of Seattle, injured but alive. Miss Batzer's body will be brought out after spring thaws have reduced the 14 feet of snow at the crash scene.

DR. JACKSON M. MILLS

Specialist, Member of the Peary
Relief Expedition, Dies at 78

Dr. Jackson M. Mills, a specialist in diseases of the eye, ear, nose and throat, with an office at 137 East Fifty-seventh Street, who was a member of the Peary relief expedition of 1893, died March 18 in the New York Hospital, after a week's illness. His age was 78.

Born in Nashville, Tenn., Dr. Mills received his M. D. from the University of Nashville in 1884 and then studied in Vienna, Berlin and Paris. He had practiced in this city for fifty years.

Dr. Mills was a life member of the Explorers Club and also belonged to the New York Academy of Medicine and the New York Athletic Club.

He leaves a widow, the former Eudolia Staub, and a brother, Reuben Mills of Nashville.

MILTON J. SEELEY

Trained Dogs for Byrd Antarctic
Expeditions and for the Army

WOLFEBORO, N. H., May 29 (AP)—Milton J. Seeley, who trained sled dogs for Admiral Richard E. Byrd's Antarctic expeditions, died yesterday in Huggins Memorial Hospital here at the age of 51. Mr. Seeley organized the firm of Seeley & Co. in New York. He was born in Mantion, Mich.

He leaves a widow.

Until his death Mr. Seeley was active in training dogs for use by the Army.

George Curtis Martin, Geologist and Explorer

Headed Geographic Society
Expedition to Alaska in 1912

WASHINGTON, June 23 —George C. Martin, geographer and geologist, died here today after an illness of several weeks. His age was 68.

Born in Cheshire, Mass., Mr. Martin attended Cornell and Johns Hopkins Universities and taught for a time at the latter institution. For twenty years he was a member of the United States Geological Survey. He was a member of the American Society of Geographical Nomenclature and for eight years preceding his death was an executive of the United States Board of Geographical Names.

In 1912 he was a member of the National Geographic Society's expedition to Mount Katmai, Alaskan volcano, near which is the famous Valley of Ten Thousand Smokes. He was a member of the Geological Society of America, the American Geographical Society and other scientific organizations.

A son, William Martin, who is now in Peru as a representative of the Department of Agriculture; a daughter, Mrs. Louise Harrington of Adams, Mass., and a brother, Col. Lawrence Martin, chief of the map division of the Library of Congress, survive.

Former Pilot for Wilkins Missing on Atlantic Patrol

Al Cheesman, of R. C. A. F.,
Served on Polar Expeditions

PORT ARTHUR, Ont., Jan. 21 (CP).—Flying Officer Al Cheesman, Royal Canadian Air Force, who was the pilot for Sir Hubert Wilkins's Antarctic and Arctic expeditions, was reported missing, in a message received today by his wife, Mrs. Eva Cheesman. He was believed to have been flying on an Atlantic patrol.

Cheesman, forty-three years old, piloted a plane in Sir Hubert's aerial expedition in search of six missing Russian trans-Polar flyers in 1937. The expedition lasted five months.

A native of St. John, N. B., he flew in the Antarctic with Wilkins in 1929. Before the war he operated a plane commercially here. He enlisted in the R. C. A. F. as a sergeant-pilot in 1940.

Charles F. Marvin

WASHINGTON, June 5 (AP)—Dr. Charles F. Marvin, who passed on here today, was Chief of the United States Weather Bureau for 21 years before he retired in 1934.

He invented many meteorological instruments during his long service and was knighted by the King of Norway for furnishing weather information to Roald Amundsen on his polar expedition. When he joined the forecasting service it was part of the Army Signal Corps.

Mrs. William Bartlett, Mother of Arctic Explorer

Newfoundland Widow, 90,
Was Friend of Grenfell

BRIGUS, N. F., Jan. 16.—Mrs. Mary Jemina Leamon Bartlett, mother of Captain Robert A. (Bob) Bartlett, Arctic explorer, died today at her home, Hawthorne Cottage, which was built 150 years ago by her grandfather, Robert John Cousins Leamon, who came from Dorset, England, to settle in Brigus. She was ninety years old.

Mrs. Bartlett was married sixty-five years ago in Hawthorne Cottage to Captain William J. Bartlett, who for fifty years plied Northern waters as a seal hunter, merchant and cod fisherman. He died ten years ago.

Active in church work and philanthropic activities, Mrs. Bartlett also was for a time a member of the school board. She was a friend of Sir Wilfred Thomason Grenfell, founder of the Labrador Medical Mission, who died in 1940.

She was a member of the United Church in Brigus, and before her marriage had been organist in the Wesleyan Methodist Church, its predecessor. She learned to play the organ while a student at Miss LeGaley's School at St. Johns, from which she was graduated in the late 1860's.

Her explorer son, who for twelve years has sailed annually into Arctic waters in his schooner, the Effie M. Morrissey, always stopped at Brigus on his way north. It was his custom to bring his mother such practical presents as live-stock and chickens. She had nearly twenty cows which made the schooner trip with Captain Bartlett from Staten Island.

Surviving are two other sons, Will and Lewis Bartlett, and four daughters, Mrs. Mary Elizabeth Wilmot Bartlett Angel; Mrs. Beatrice Stentaforde Bartlett Dove; Miss Emma Gertrude and Miss Eleanor Bartlett.

Arctic Planes Adopt White as Camouflage

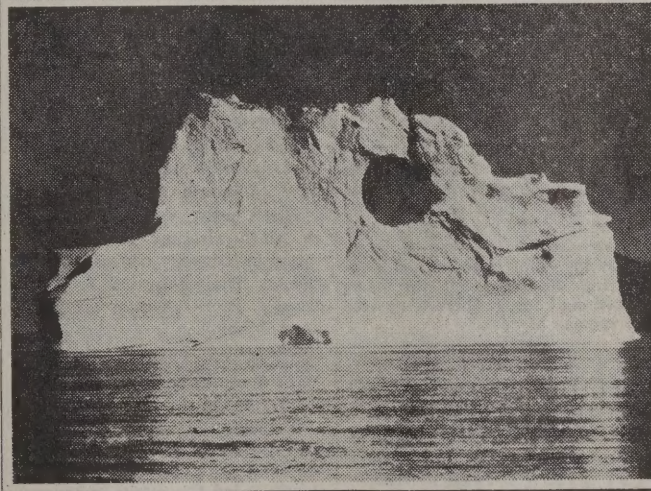
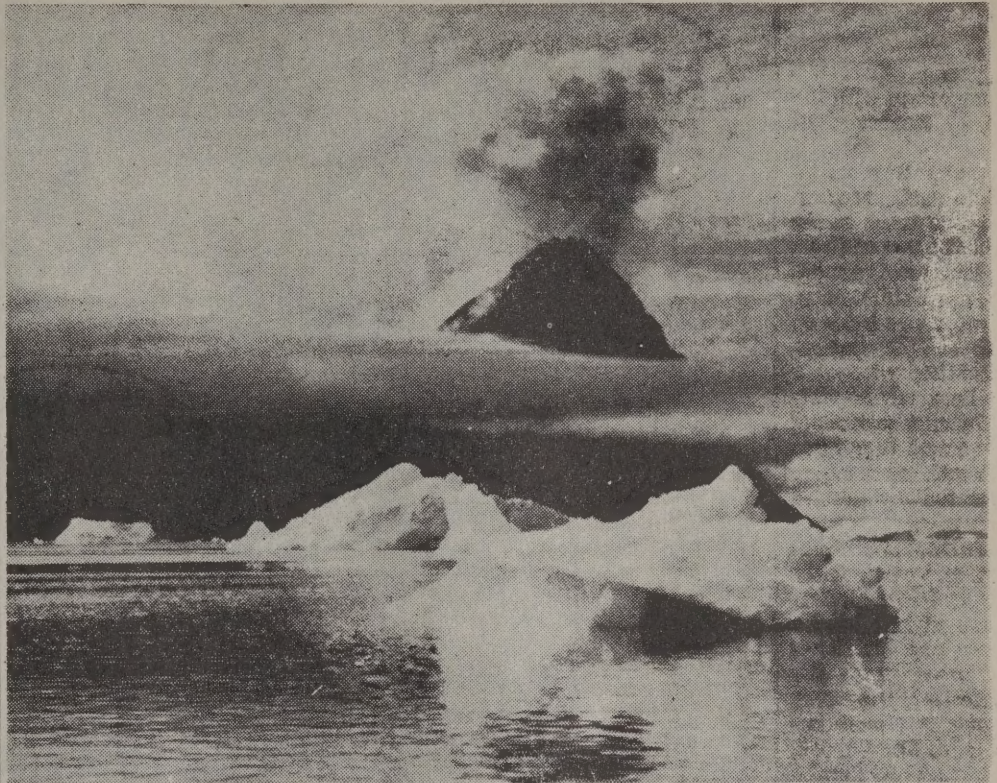
Flying boats of the RAF Coastal Command have adopted an "all-white" camouflage in Arctic regions when on anti-submarine patrol and convoy protection. London hears that the experiment has proved highly satisfactory.

White makes the flying boats almost invisible against cloud and snow-covered background and provides an element of surprise in encounters with U-boats.

Russian Polar Flier Promoted May 2

A message from Moscow last night said that "the famous Soviet flier, Mikhail Gromoff, has been made a lieutenant general in the Red Army," the London radio reported. Gromoff was the chief pilot of a Russian plane that flew non-stop from Moscow to California over the North Pole in 1937, the broadcast added. It was recorded by the Columbia Broadcasting Station.

Ice Grandeur on the Northern Patrol



Top: The cold and mysterious beauty of the Far North as photographed by Commander Donald B. McMillan, U. S. N. Here icebergs glisten in bright sunlight providing contrast to the dark and rugged contours of an unidentified coastline. Left: Another weird monument of icy seas gleams like polished marble.

is very rapid melting around, and just within, the glacial margins. Heavy floods of water, turbid with suspended mud and sand, pour out, frequently floating off blocks of ice with boulders embedded in them. These eventually become stranded and melt, dropping their boulder loads at considerable distances from the edge of the main ice mass. Geologists know all this solid discharge from under the glacier edge by the vivid name of "outwash."

When the long Winter sets in, bitterly cold winds, at velocities of 100 miles an hour and more, pour down off the interior of the ice sheet. The outwash is soon dried out, and the lighter particles blow outward in great clouds. Sandstorms at lower levels, dust storms at all levels, rule the season. Except for temperature, conditions are not unlike those encountered in the Libyan desert. Exposed stone surfaces are sand-blasted in almost exactly the same manner in both regions.

Eskimos Learn Russian

Soviet linguists have devised an alphabet for Eskimos and are teaching them to read and write.

LOESS SOIL IS TRACED TO ANCIENT ICE SHEET

Geologist Lays Rich Farm Land to Glacial Dust Storms

ANN ARBOR, Mich. (Science Service)—Some of the best farm lands in America are the product of unimaginably violent dust storms—dry, gray blizzards that howled off the edges of the vast glacial sheets of the Pleistocene Ice Age. They are the wind-deposited soils known technically as

loess, that are found over wide stretches of the Midwest and also (though more thinly deposited) in parts of the East.

Wind has long been credited with the creation of the loess, but there have been many things about this soil type that have puzzled geologists. New light is thrown on the problem by Professor William H. Hobbs, University of Michigan geologist, as a result of long studies around the ice sheet that covers Greenland—one of the two places on earth where Ice Age conditions still persist.

During Greenland's short, but surprisingly warm, Summers there

SEAL 'CEMETERY' IN ANTARCTIC

British Explorer Tells of 'Awe-Inspiring' Discovery He Made

Where wild elephants in Africa, feeling death approaching, wander off to die is one of the dark mysteries of the Dark Continent. No one, it is asserted, is known to have come across an elephant graveyard.

One author in a book about the Antarctic surmised that when penguins walk inland they are sick and about to die.

Dr. R. C. Murphy, curator of the American Museum of Natural History, has related how at South Georgia Island he observed that he almost never found the dead bodies of full-grown penguins. One day he discovered the reason.

At the summit of a long hill he came upon a little transparent lake formed entirely of snow water, and around the margin stood several sickly looking penguins, silent and drooping, seemingly exhausted by the long climb from the beach to the top of the hill.

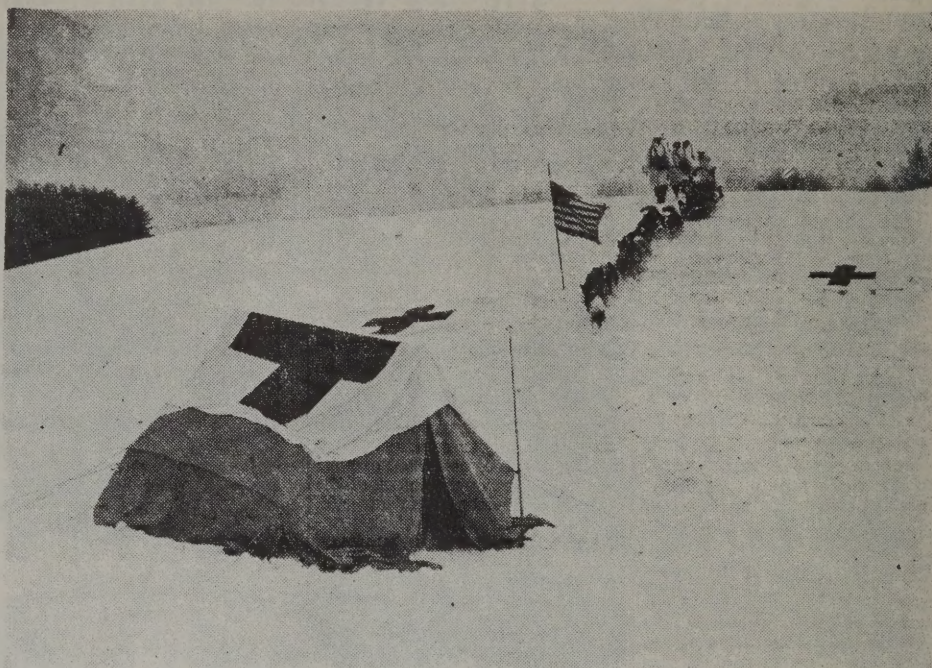
"I don't know why," said he, "but the air seemed oppressed with tragedy. I walked to the edge of the pool and looked into its translucent depth. On the cold blue bottom, with their flippers outstretched, were hundreds, possibly thousands, of dead penguins that had made the last weary climb to reach this peaceful spot. They lay face up, their breasts reflecting gleams of light from the darker water. They had come to their last rest. For months, perhaps years, they would undergo no bodily change in their frozen grave."

G. Murray Levick, surgeon commander, Royal Navy, who accompanied Captain Scott on his quests for the South Pole, writes to The London Times to say that in his observations of penguin rookeries he never obtained evidence of these birds going inland to die. But he did find a colony of Adélie penguins, numbering about 100 nests, from the huge rookery at Cape Adair, who had climbed over 700 feet up the precipitous side of the cape and were rearing their young there, though there was plenty of room for them down below with the others by the sea, and this choice of their position entailed an ascent and descent which took them at least two hours each way in order to fetch food for their young from the patches of open water.

"There were no signs either here or near the other rookeries of dead penguins inland," he goes on, "and my observations included a very long distance of the coastline and ice-foot."

However, "at Hell's Gate, near the Drygalski ice barrier, on Captain Scott's last expedition, Mr. R. E. Priestly and I found a large seal 'cemetery' a few hundred yards

THE ARMY TRAINS ITS MEDICAL FORCE FOR ARCTIC SERVICE



Ambulance sled pulled across snow by Siberian huskies at training center near Wonalancet, N. H.

from the sea ice. Here the frozen and mummified bodies of a very large number of seals (Weddells and a large number of 'crab eaters') were lying on a patch of ground in a clump just as if they had been carried and left there by human beings, which was impossible.

"The varying ages of these bodies showed that the clump had been added to throughout the centuries. It was quite out of sight from the ice-foot from which the seals had crawled from the sea to this particular spot to die. It was to us an almost incredible and rather awe-inspiring discovery, all the more astonishing because there were here two species of seal."

Byrd's Lead Dog Dies Far From Arctic Snow

BEAVER, Pa. (U.P.)—Dreaming of unleashed chases across open, white country, Korac—famous leading dog on the third Byrd Antarctic expedition—died peacefully in his sleep at the home of his master. The well-known Eskimo dog was born 12 years ago in New Hampshire, offspring of a pair of dogs imported from Greenland. He joined the third Byrd expedition in 1939 at the prominent Chinook Kennels in New England.

In Little America, Korac was the lead dog of the sled team which made an 850-mile exploring trip. Accounts said he "completed his work with efficiency and distinction."

Korac's most recent honors were the two blue ribbons he won at the Sportsmen's Show in Pittsburgh early this year.

WHALE MEAT SOUGHT AS FOOD

WASHINGTON, May 1—Whales, those greatest of mammals whose pastures comprise seven seas, will be hunted for their flesh, which will be used to help fill the gap in the nation's meat supply, the Department of Interior has announced.

Whale meat, which is described as "dark red and tasting something like beef," will not be rationed. The whales will be hunted from a shore station which has been established in California, and consequently the meat will probably be available chiefly on the West Coast.

A hundred and twenty-five years ago, when whale oil was the civilized world's chief illuminant, America led the world in the pursuit of the sperm whale, source

of spermaceti candles of the past, and the right whale, from which came the supple whalebone, used to mold the female figure, but now America does little whaling, most of it being done by Scandinavian "floating factories" which pursue the leviathans along the edges of the Antarctic ice pack.

Three boats will operate from the California shore station in search of whales. The Interior Department insists that whale meat, which of course is not fish, does not taste like fish, though it comes from the sea. The flesh, the department said, is "wholesome when properly handled and it does not have the fishy taste which makes seal meat almost unpalatable."

His owner, Harrison Holt Richardson, a member of the polar exploring party, is now a medical student at the University of Pittsburgh, and an ensign in the Naval Reserve.

New Navy Map of Antarctica

WASHINGTON, May 12 (P)—The most complete chart ever issued of Antarctica was published today by the Naval Hydrographic Department, which said that it included all the data obtained by Rear Admiral Richard E. Byrd and his men during their recent explorations and all that gathered by previous expeditions.

Bald Eagle Bounty-Free In Alaska by 5-3 Vote

JUNEAU, Alaska, Feb. 18 (P)—The bald eagle, defended as a strong-winged national symbol, no longer will bring a \$3 bounty to Alaskan hunters.

The Territorial Senate voted 5 to 3 for repeal of the Bounty Act.

The appeal in behalf of the eagle as a national figure came from Gov. Ernest Gruening, who personally addressed the Senate. He said President Roosevelt might issue an executive order against destruction of the bird.

War in the Far North

WAR DISCOVERS ALASKA.
By Joseph Driscoll. 352 pp.
Philadelphia: J. B. Lippincott.
\$3.

By JEAN POTTER

ALASKA has been called "the most wonderfully misunderstood country in the world." Until the Japanese attacked the Aleutians, most Americans knew little about the Territory—and cared less. While Soviet Russia built large industrial cities in Arctic and Far Eastern Siberia, Congress appropriated scant funds for the development of the American northland. While Japan fortified the Kurile Islands and sent "fishing boats" across the Pacific to prowling along Aleutian shores, the United States made no move to prepare Alaska for war.

All this is changing fast. Today Alaskan skies thunder with bombers and fighters. In the past few years, new bases have taken shape in the wilderness. Large numbers of troops have been rushed north from the States. Reporters have followed on assignment to the pioneer land, breaking new journalistic ground. Much Gold Rush fiction had been published about Alaska, but little was printed till recently about life and action in the modern Territory—about its strategic value, its resources and its people. Joseph Driscoll, New York Herald Tribune correspondent, returning from several months in wartime Alaska, has written a valuable book about those topics.

Mr. Driscoll traveled extensively and visited the new Army and Navy bases—many that are known to the enemy, some that are secret. He talked to admirals and generals, to buck privates and ordinary seamen, to Territorial officials, to Aleuts, Eskimos, and Indians and the white man-on-the-street. Much of the trip was made by plane, for distances are vast and there are few roads. He flew with Alaska's Governor in an old Stinson along the magnificent snowpeaks of the coast and out across the wide gulf. He rode with bush pilots in "puddle-jumping" pontoon ships.

Censorship has prevented him from giving details, but Mr. Driscoll reports that he was impressed by the amount of military construction in progress. A great chain of military airports and airfields has been built, starting in the prairie provinces of Canada and extending up to Fairbanks, Alaska, where it forks out to Nome and the Aleutians.

The Russians have their own system of airports leading down from the Bering Sea to Vladivostok, 600 miles from Japan. "Aviation and Alaska are synonymous," he states. "Without planes Alaska would be a remote wilderness without strategic value. With planes Alaska plugs the gap between the Americas and Asia and blueprints a path of destruction for the isles of the Rising Sun. We must never forget that the Great Circle (the shortest route) from the United States to the Orient does not go via Hawaii but via Alaska."

General Buckner, the white-haired Kentuckian who heads the Alaska Defense Command, told Mr. Driscoll: "There are two ways of dealing with a rattlesnake. One is to sit still and wait for the snake to strike. The other is to bash in the snake's head and put it out of commission. That's what I favor."

To head the Navy in Alaska, President Roosevelt has appointed Rear Admiral Walter Reeves, formerly in command of the aircraft carrier Wasp and one of the great heroes of this war. In charge of the Army at the large Kodiak base is another tough and hard-working officer, General Charles H. Corlett, a former Colorado cowboy who knows how to maintain morale among his men on the blacked-out island outpost. The mood at Kodiak is well expressed in the slogan posted outside his office: "Let's be just as mean and vicious as those Nipponese sons ambitious."

This mood is shared by the Alaskans, whites and natives alike. Indians have flocked to enlist in the Army. Eskimos are proving skillful soldiers. Government officials arriving at remote settlements soon after war was declared found it necessary to prove their identity at gunpoint. Most Alaskans are excellent shots from childhood up and in the towns guerrilla bands are being organized of all those qualified to "shoot a squirrel or a Jap at a distance." These people are frontiersmen and Alaska is a democratic country with far less class distinction than the States.

Alaska is a land of characters. "New York City, with close to seven million people, could never produce the rich, racy, rare characters that Alaska can muster out of one-hundredth of that number." There are oldtime sourdoughs, remnants of the Gold Rush. There are strong and color-

ful characters, too, among today's Territorial leaders. There is energetic Ernest Gruening, former newspaper man and Washington official, who likes the rugged country so much that he and his wife climb a mountain every week-end.

There is a cigar-puffing Colonel Otto Ohlson, for twenty-one years manager of the Alaska Railroad. He works long and hard on the line's operation, but like other men in the northland he takes time off for fun, stopping his speeder-car to jump out and shoot ptarmigan and grouse in the wilds along the track. There is "Cap" Lathrop, richest man in Alaska, who went north in a small schooner a half-century ago and today operates a coal mine, a newspaper, far-flung real estate properties, several theatres and America's farthest north commercial radio station. All these men share a strong enthusiasm for Alaska. Even General Buckner, after two and a half years in the Territory, likes it so much that he plans to live there on his retirement after the war.

Like other reporters who have visited the Territory, Mr. Driscoll has caught this enthusiasm. He considers Alaska a great land, not only for its strategic location on the path of intercontinental air routes, but for its wealth of undeveloped mineral and forest and agricultural resources. Those who know Alaska will agree fully with his statement that "No American doubts that we will win the war eventually, but how soon we achieve that victory may depend upon what use we can make of Alaska in relation to certain other parts of the world."

Eskimo Legends

BEYOND THE CLAPPING MOUNTAINS: Eskimo Stories From Alaska. By Charles Gillham. Illustrations by Chani-mun. 134 pp. New York: The Macmillan Company. \$1.50.

DURING the eight different Summers which the author, who is a biologist for the United States Government, spent in Alaska among the Eskimos, studying waterfowl and animal life, he heard through an interpreter many of the tales with which the Eskimo men and boys entertain one another during the long, monotonous Arctic days. Thirteen of these stories Mr. Gillham has retold, keeping the simplicity and directness with which the English-speaking Eskimo told them.

The Eskimo, as Mr. Gillham

reminds us in a foreword, lives in a bleak, desolate land; he has few possessions, and trees, flowers, fruits are outside his experience. The stories which the Eskimos tell are concerned with the things that these people know well—animals, water, kyaks, ice, snow and hunting implements. In these folktales, then, we find the mountains that clap together and make the trip very dangerous for the ducks and wild geese and other birds who fly north to the Bering Sea to raise their little ones; we are told how the sea-gulls learned to fly; how Mr. Crow took the daughter of the Emperor Goose for his wife; how the Mouse and the Flea decided that "short visits make long friends"; how the foxes became red; how the mussel caught the crow; how the little owl's name was changed when he brought back the fire to the good Eskimo, and a half dozen other tales about the adventures of Arctic creatures. Most of these tales have a moral and justice is meted out to the wrongdoer and the foolish in a fashion that little children find very satisfying. The stories in Mr. Gillham's retellings have retained the quality of the spoken word. They have a child-like quality of imagination and a humor that appeals to boys and girls from 8 to 12, while their easy, unhurried style suggests the peace of snow-covered lands and soft gray skies out of which the wild geese come flying. Sincere and authentic and human, these tales give to the American reader a feeling of friendly intimacy with the inhabitants of faraway Alaska.

The illustrations, made by a 12-year-old Eskimo girl, have an extraordinary liveliness and catch the humor of the tales. "Beyond the Clapping Mountains" is a welcome addition to the folktale shelves and will be very helpful to the storyteller. Older readers who desire to know more of Eskimo folklore will enjoy the spirited retellings of folktales and hero sagas in "The Eagle's Gift" by Knud Rasmussen.

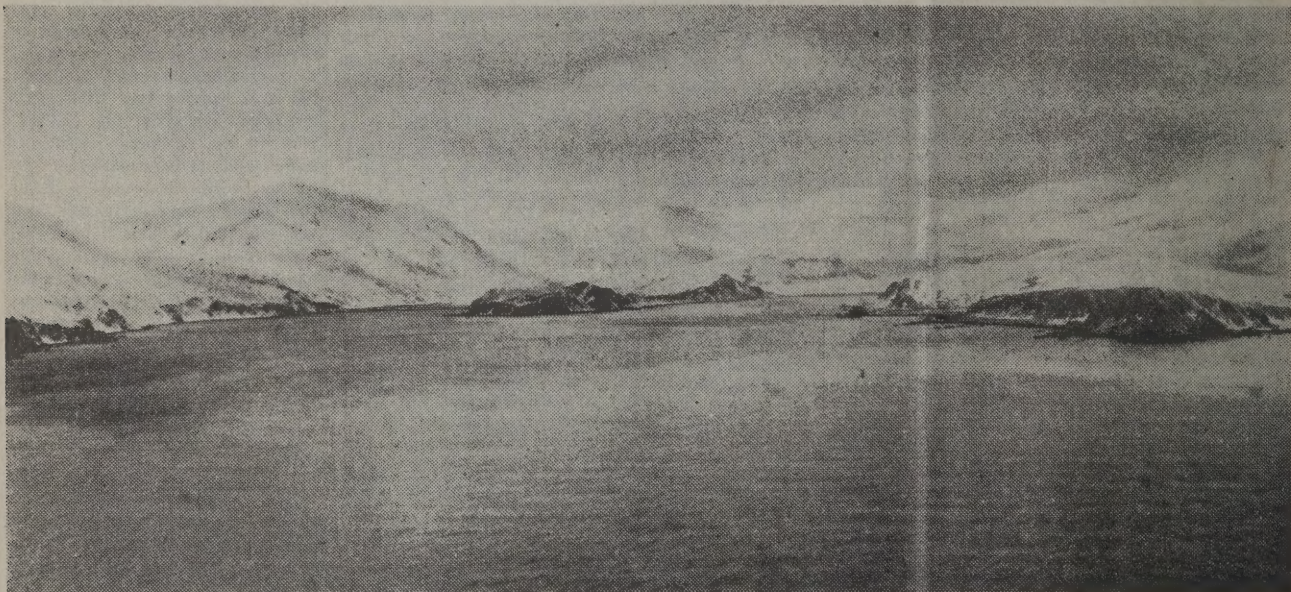
The husky is a dog native to northern North America from Alaska to Labrador. He is usually wolf-gray in color (indeed, he has some wolf blood in him) and is much used for a draft and pack animal.

The name husky is said to be derived from an Algonquin Indian word for eskimo. In the early days, the white missionaries called the Labrador natives "huskimaux," a form of the word esquimaux. Curiously enough, the name husky was first applied to the natives themselves and only later on came to be identified with the eskimo dogs.

WHERE OUR TROOPS BEGAN THEIR DRIVES AGAINST THE JAPANESE ON ATTU



Massacre Bay (left foreground), where the Americans landed and moved inland against the enemy. To the right is Chirikof Point and at the left are mountains overlooking Chichagof harbor. (U. S. Navy)



Holtz Bay, another of the landing places. This bay is northwest of Massacre Bay.

(U. S. Army Air Forces)



Here a Coast Guard cutter is passing close to a mountainous shore typical of all of the Aleutian Islands